



BRISTOL BAY SOCKEYE SALMON (Oncorhynchus nerka) 1973

A Compilation of Catch and Escapement Data

Compiled and Edited by:  
Paul Krasnowski and Richard Randall

1975

## ADF&G TECHNICAL DATA REPORTS

This series of reports is designed to facilitate prompt reporting of data from studies conducted by the Alaska Department of Fish and Game, especially studies which may be of direct and immediate interest to scientists of other agencies.

The primary purpose of these reports is presentation of data. Description of programs and data collection methods is included only to the extent required for interpretation of the data. Analysis is generally limited to that necessary for clarification of data collection methods and interpretation of the basic data. No attempt is made in these reports to present analysis of the data relative to its ultimate or intended use.

Data presented in these reports is intended to be final, however, some revisions may occasionally be necessary. Minor revision will be made via errata sheets. Major revisions will be made in the form of revised reports.

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## TABLE OF CONTENTS

|   | Page |
|---|------|
| LIST OF TABLES.....   | i    |
| LIST OF FIGURES.....  | v    |
| INTRODUCTION.....   | 1    |
| SUMMARY OF BRISTOL BAY CATCH AND ESCAPEMENT.....                | 3    |
| BRISTOL BAY EMERGENCY ORDER FISHING PERIODS.....                | 7    |
| SUMMARY OF THE 1973 SEASON FOR THE NAKNEK-KVICHAK DISTRICT..... | 8    |
| SUMMARY OF THE 1973 SEASON FOR THE EGEGIK DISTRICT.....         | 23   |
| SUMMARY OF THE 1973 SEASON FOR THE UGASHIK DISTRICT.....        | 32   |
| SUMMARY OF THE 1973 SEASON FOR THE NUSHAGAK DISTRICT.....       | 37   |
| SUMMARY OF THE 1973 SEASON FOR THE TOGIAK DISTRICT.....         | 60   |
| MEAN WEIGHTS FOR SOCKEYE SALMON IN CATCH SAMPLES.....           | 68   |
| LITERATURE CITED.....   | 70   |
| APPENDIX.....   | 71   |

## List of Tables

|           |  | Page |
|-----------|--|------|
| Table 1.  | Bristol Bay sockeye salmon inshore return, by river, 1973...   | 3    |
| Table 2.  | Bristol Bay sockeye salmon return, age group by river system, percent, 1973.....   | 4    |
| Table 3.  | Bristol Bay sockeye salmon return, age group by river system, percent, 1973.....   | 5    |
| Table 4.  | Bristol Bay sockeye salmon return, ocean age by river, number and percent, 1973.....                                     | 6    |
| Table 5.  | Bristol Bay emergency order fishing periods by district, 1973.....   | 7    |
| Table 6.  | Naknek-Kvichak District inshore run of sockeye salmon, age group by sex, number and total percent, 1973.....             | 10   |
| Table 7.  | Kvichak River apportioned catch and escapement of sockeye salmon, age group by sex, number and percent, 1973.....        | 11   |
| Table 8.  | Branch River apportioned catch and escapement of sockeye salmon, age group by sex, number and percent, 1973.....         | 12   |
| Table 9.  | Naknek River apportioned catch and escapement of sockeye salmon, age group by sex, number and percent, 1973.....         | 13   |
| Table 10. | Naknek-Kvichak District commercial catch of sockeye salmon, sex composition by sample period, 1973.....                  | 14   |
| Table 11. | Naknek-Kvichak District commercial catch of sockeye salmon, age group by sample period and sex, number and percent, 1973 | 15   |
| Table 12. | Kvichak River daily sockeye salmon escapement counts, 1973..   | 16   |
| Table 13. | Kvichak River escapement of sockeye salmon, sex composition by sample period, 1973.....                                  | 17   |
| Table 14. | Kvichak River escapement of sockeye salmon, age group by sample period and sex, number and percent, 1973.....            | 18   |
| Table 15. | Branch River daily sockeye salmon escapement counts, 1973...   | 19   |
| Table 16. | Branch River escapement of sockeye salmon, sex composition by sample period, 1973.....                                   | 20   |
| Table 17. | Naknek River daily sockeye salmon escapement counts, 1973...   | 21   |
| Table 18. | Branch River escapement of sockeye salmon, sex composition by sample period, 1973.....                                   | 22   |

## List of Tables

|  | Page |
|--|------|
| Table 19. Egegik River catch and escapement of sockeye salmon, age group by sex, number and percent, 1973.....                         | 26   |
| Table 20. Egegik District commercial catch of sockeye salmon, sex composition by sample period, 1973.....                              | 27   |
| Table 21. Egegik District commercial catch of sockeye salmon, age group by sample period and sex, number and percent, 1973.....        | 28   |
| Table 22. Egegik River daily sockeye salmon escapement counts, 1973.....   | 29   |
| Table 23. Egegik River escapement of sockeye salmon, sex composition by sample period, 1973.....                                       | 30   |
| Table 24. Egegik River escapement of sockeye salmon, age group by sample period and sex, number and percent, 1973.....                 | 31   |
| Table 25. Ugashik River catch and escapement of sockeye salmon, age group by sex, number and percent, 1973.....                        | 34   |
| Table 26. Ugashik River daily sockeye salmon escapement counts, 1973....   | 35   |
| Table 27. Ugashik River escapement of sockeye salmon, sex composition by sample period, 1973.....                                      | 36   |
| Table 28. Nushagak-Igushik District inshore run of sockeye salmon, age group by sex, number and total percent, 1973.....               | 40   |
| Table 29. Igushik River apportioned catch and escapement of sockeye salmon, age group by sex, number and percent, 1973.....            | 41   |
| Table 30. Wood River apportioned catch and escapement of sockeye salmon, age group by sex, number and percent, 1973.....               | 42   |
| Table 31. Nuyakuk River apportioned catch and escapement of sockeye salmon, age group by sex, number and percent, 1973.....            | 43   |
| Table 32. Nushagak-Mulchatna River apportioned catch and escapement of sockeye salmon, age group by sex, number and percent, 1973..... | 44   |
| Table 33. Snake River apportioned catch and escapement of sockeye salmon, age group by sex, number and percent, 1973.....              | 45   |
| Table 34. Nushagak-Igushik District commercial catch of sockeye salmon, sex composition by sample period, 1973.....                    | 46   |
| Table 35. Nushagak-Igushik District commercial catch of sockeye salmon, age group by sample period and sex, number and percent, 1973.. | 47   |

## List of Tables

|           |  | Page |
|-----------|--|------|
| Table 36. | Igushik Beach Sub-district commercial catch of sockeye salmon, sex composition by sample period, 1973.....                       | 48   |
| Table 37. | Igushik Beach Sub-district commercial catch of sockeye salmon, age group by sample period and sex, number and percent, 1973..... | 49   |
| Table 38. | Igushik River daily sockeye salmon escapement counts, 1973.....  | 50   |
| Table 39. | Igushik River escapement of sockeye salmon, sex composition by sample period, 1973.....  | 51   |
| Table 40. | Wood River daily sockeye salmon escapement counts, 1973.....   | 52   |
| Table 41. | Wood River escapement of sockeye salmon, sex composition by sample period, 1973.....   | 53   |
| Table 42. | Nuyakuk River daily sockeye salmon escapement counts, 1973.....  | 54   |
| Table 43. | Nuyakuk River escapement of sockeye salmon escapement counts, 1973.....  | 55   |
| Table 44. | Nuyakuk River escapement of sockeye salmon, age group by sample period and sex, number and percent, 1973.....                    | 56   |
| Table 45. | Nushagak-Mulchatna River daily sockeye salmon escapement counts, 1973.....   | 57   |
| Table 46. | Nushagak-Mulchatna River escapement of sockeye salmon, sex composition by sample period, 1973.....                               | 58   |
| Table 47. | Snake River escapement of sockeye salmon, sex composition by sample period, 1973.....  | 59   |
| Table 48. | Togiak River catch and escapement of sockeye salmon, age group by sex, number and percent, 1973.....                             | 62   |
| Table 49. | Togiak District commercial catch of sockeye salmon, sex composition by sample period, 1973.....                                  | 63   |
| Table 50. | Togiak District commercial catch of male sockeye salmon, age group by sample period, number and percent, 1973.....               | 64   |
| Table 51. | Togiak River daily sockeye salmon escapement counts, 1973.....   | 65   |
| Table 52. | Togiak River escapement of sockeye salmon escapement counts, 1973.....   | 66   |

List of Tables

|   | Page |
|---|------|
| Table 53. Togiak River escapement of sockeye salmon, age group by sample period and sex, number and percent, 1973.....                        | 67   |
| Table 54. Mean weights by age class for sockeye salmon in the catch samples, Bristol Bay, 1973.....   | 68   |
| Appendix Table A-1. Nushagak-Mulchatna tower escapement of sockeye salmon, age group by sample period and sex, number and percent, 1973 ..... | 72   |
| Appendix Table A-2. Nushagak-Mulchatna River system estimated escapement of sockeye salmon, age group by sex, number and percent, 1973 .....  | 73   |

## List of Figures

|   | Page |
|---|------|
| Figure 1. Approximate locations of catch sampling and counting towers, Bristol Bay, 1973..... | 2    |
| Figure 2. Naknek-Kvichak District commercial fishing boundaries, 1973.....                    | 9    |
| Figure 3. Egegik District commercial fishing boundaries, 1973.....                            | 25   |
| Figure 4. Ugashik District commercial fishing boundaries, 1973.....                           | 33   |
| Figure 5. Nushagak-Igushik District commercial fishing boundaries, 1973.....                  | 39   |
| Figure 6. Togiak District commercial fishing boundaries, 1973.....                            | 61   |

## INTRODUCTION

This publication is the eleventh in a series intended to present annual catch and escapement statistics for the Bristol Bay sockeye salmon fishery.

Personnel of the Alaska Department of Fish and Game, Division of Commercial Fisheries collected all data and aged all scales for both the catch and escapement. Final catch data was compiled from fish tickets by the Department's Statistics Section. Age-weight-length data collected by field crews, was card punched by the Data Processing Division of the Alaska Department of Administration. Final tabulation of catch, escapement, and A-W-L data was compiled by Jerry Hautamaki of the University of Washington Computer Center in Seattle under contract to the Alaska Department of Fish and Game.

## METHODS AND MATERIALS

The data used in this report were collected by field crews and catch samplers stationed at counting towers and selected canneries throughout Bristol Bay. Figure 1 shows the approximate locations of these projects.

Each sampling station was supplied with a measuring board or calipers, gum cards, weighing scales, and forms for the compilation of sex, age, weight and length data. Length measurements were recorded to the nearest millimeter and weights to the nearest one-tenth of a pound. Scale samples were placed on numbered gum cards to be pressed to form plastic impressions suitable for age determination.

Catch sample sizes were based on statistical analysis of past sampling efforts which indicated that a 600-fish sample per fishing period was valid for age and sex data. Each sample period was spread out as much as possible among delivering scows. Escapement samples were of similar size, evenly distributed over the days.

Escapement enumeration of sockeye salmon was conducted on eleven river systems in Bristol Bay in 1973. These were the Kvichak, Branch, Naknek, Egegik, Ugashik, Wood, Igushik, Nuyakuk, Nushagak-Mulchatna, Snake and Togiak. Escapement counts are made from towers located on the banks of the rivers. Counts are conducted for ten minutes on each bank, each hour. The counts are expanded to estimate hourly escapements and the expanded counts are summed to determine the daily escapement total.

Age designation in this report follows the Gilbert-Rich notation.

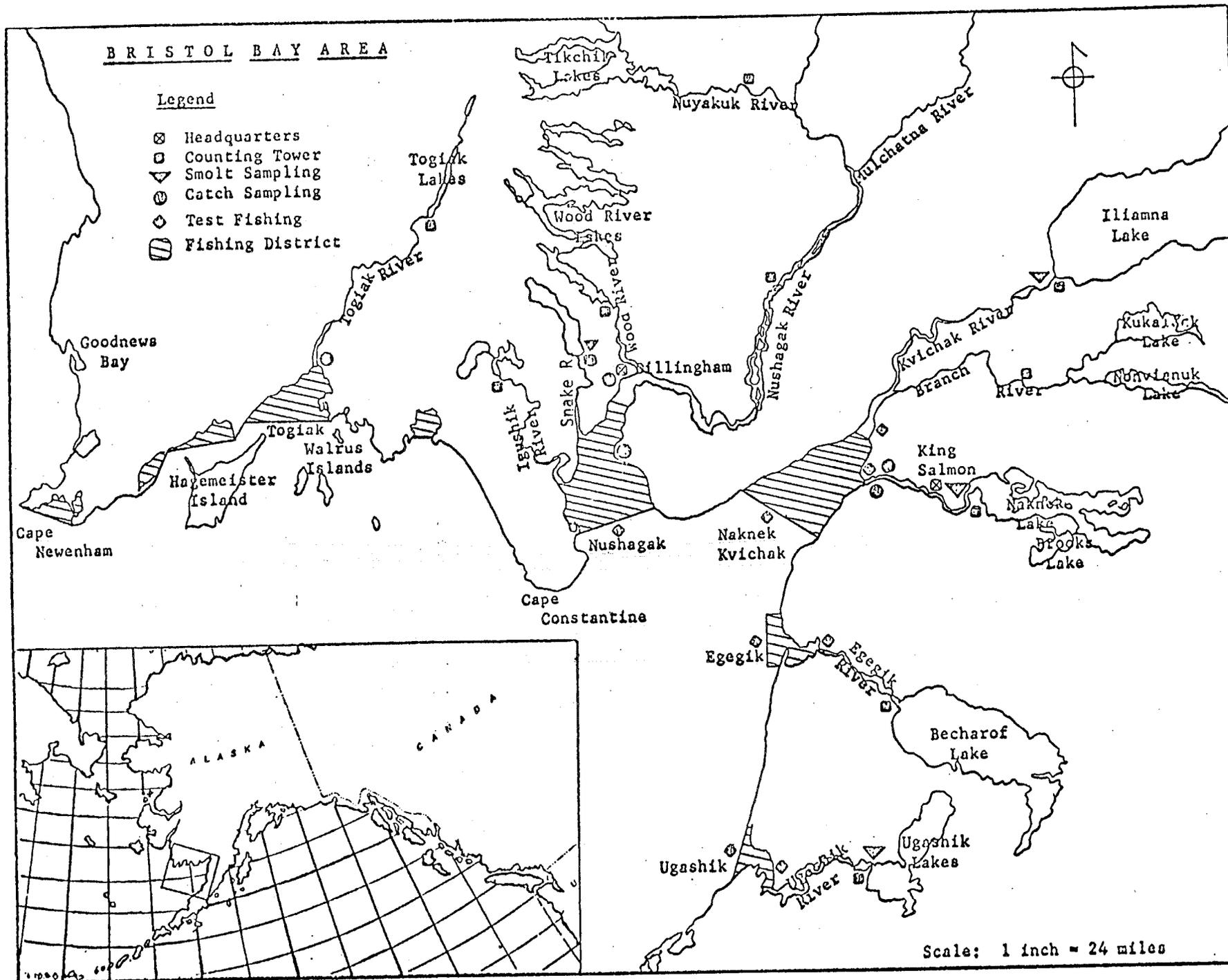


Figure 1. Approximate locations of catch sampling and counting towers, Bristol Bay, 1973.

TABLE 1 BRISTOL BAY SOCKEYE SALMON INSHORE RETURN, BY RIVER, 1973

| SYSTEM                                 | CATCH   | ESCAPEMENT | TOTAL RETURN |
|--|---------|------------|--------------|
| KVICHAK RIVER                          | 21,791  | 226,554    | 248,345      |
| BRANCH RIVER                           | 2,096   | 35,280     | 37,376       |
| NAKNEK RIVER                           | 144,362 | 356,676    | 501,038      |
| SUB-TOTAL<br>NAKNEK-KVICHAK DISTRICT   | 168,249 | 618,510    | 786,759      |
| EGEGIK RIVER                           | 221,337 | 328,842    | 550,179      |
| UGASHIK RIVER                          | 3,920   | 38,988     | 42,908       |
| IGUSHIK RIVER                          | 36,957  | 59,508     | 96,465       |
| WOOD RIVER                             | 113,254 | 330,474    | 443,728      |
| NUYAKUK RIVER                          | 66,193  | 110,016    | 176,209      |
| NUSHAGAK-MULCHATNA RIVER               | 55,396  | 80,394     | 135,790      |
| SNAKE RIVER                            | 293     | 915        | 1,208        |
| SUB-TOTAL<br>NUSHAGAK-IGUSHIK DISTRICT | 272,093 | 581,307    | 853,400      |
| TOGIAK RIVER                           | 95,723  | 95,730     | 191,453      |
| TOTAL BAY                              | 761,322 | 1,663,377  | 2,424,699    |

TABLE 2 BRISTOL BAY SOCKEYE SALMON RETURN, AGE GROUP BY RIVER SYSTEM, NUMBER, 1973

| RIVER                         | AGE GROUP |       |        |         |        |       |           |         |       |         |       |       |       | TOTAL     |
|-------------------------------|-----------|-------|--------|---------|--------|-------|-----------|---------|-------|---------|-------|-------|-------|-----------|
|                               | 31        | 32    | 41     | 42      | 43     | 51    | 52        | 53      | 62    | 63      | 64    | 73    | 74    |           |
| KVICHAK                       | --        | 792   | 682    | 97,585  | 7,169  | --    | 22,469    | 59,551  | 113   | 59,518  | --    | 446   | 26    | 248,345   |
| BRANCH                        | --        | --    | --     | 3,381   | 802    | --    | 26,374    | 1,730   | --    | 5,089   | --    | --    | --    | 37,376    |
| NAKNEK                        | --        | 499   | --     | 35,494  | 3,311  | --    | 152,743   | 63,758  | --    | 244,734 | --    | 473   | 26    | 501,036   |
| SUB-TOTAL<br>NAKNEK-KVICHAK   | --        | 1,291 | 682    | 136,460 | 11,282 | --    | 201,586   | 125,039 | 113   | 309,341 | --    | 913   | 52    | 786,759   |
| EGEGIK                        | --        | 124   | --     | 9,142   | 785    | --    | 36,476    | 67,217  | --    | 428,209 | 1,157 | --    | 7,069 | 550,179   |
| UGASHIK                       | --        | --    | --     | 3,132   | 104    | --    | 4,803     | 11,588  | --    | 23,176  | 105   | --    | --    | 42,908    |
| IGUSHIK                       | --        | --    | 182    | 671     | --     | 62    | 83,937    | 306     | 159   | 10,378  | --    | 59    | 711   | 96,465    |
| WOOD                          | --        | 2,214 | 2,234  | 43,149  | --     | --    | 338,792   | 4,260   | 1,245 | 51,566  | --    | 248   | --    | 443,728   |
| NUYAKUK                       | --        | --    | 14,691 | 3,464   | --     | 230   | 152,514   | 278     | 278   | 4,633   | --    | 121   | --    | 176,209   |
| NUSHAGAK-MULCHATNA            | 457       | --    | 63,426 | --      | --     | 5,426 | 60,856    | --      | 3,009 | 2,515   | --    | 101   | --    | 135,798   |
| SNAKE                         | --        | --    | 11     | 554     | --     | --    | 456       | 54      | --    | 133     | --    | --    | --    | 1,208     |
| SUB-TOTAL<br>NUSHAGAK-IGUSHIK | 457       | 2,214 | 80,544 | 47,838  | --     | 5,718 | 636,555   | 4,898   | 4,691 | 69,245  | --    | 529   | 711   | 853,400   |
| TOGIKAK                       | 53        | --    | 4,280  | 20,953  | --     | 124   | 130,252   | 5,153   | 789   | 29,361  | --    | 207   | 281   | 191,453   |
| TOTAL BAY                     | 510       | 3,629 | 85,506 | 217,525 | 12,171 | 5,842 | 1,009,672 | 213,895 | 5,593 | 859,332 | 1,262 | 1,649 | 8,113 | 2,424,699 |

TABLE 3 BRISTOL BAY SOCKEYE SALMON RETURN, AGE GROUP BY RIVER SYSTEM, PERCENT, 1973

| RIVER                         | AGE GROUP |     |       |       |      |      |       |       |      |       |     |     |      | TOTAL  |
|-------------------------------|-----------|-----|-------|-------|------|------|-------|-------|------|-------|-----|-----|------|--------|
|                               | 31        | 32  | 41    | 42    | 43   | 51   | 52    | 53    | 62   | 63    | 64  | 73  | 74   |        |
| KVICHAK                       | .00       | .32 | .27   | 39.29 | 2.89 | .00  | 9.05  | 23.98 | .04  | 23.97 | .00 | .18 | .01  | 15.24  |
| BRANCH                        | .00       | .00 | .00   | 9.05  | 2.15 | .00  | 70.56 | 4.63  | .00  | 13.61 | .00 | .00 | .00  | 1.54   |
| NAKNEK                        | .00       | .10 | .00   | 7.08  | .66  | .00  | 30.49 | 12.72 | .00  | 48.85 | .00 | .09 | .01  | 20.66  |
| SUB-TOTAL<br>NAKNEK-KVICHAK   | .00       | .16 | .09   | 17.35 | 1.43 | .00  | 25.62 | 15.89 | .01  | 39.32 | .00 | .12 | .01  | 32.44  |
| EGEGIK                        | .00       | .02 | .00   | 1.66  | .14  | .00  | 6.63  | 12.22 | .00  | 77.83 | .21 | .30 | 1.29 | 22.69  |
| UGASHIK                       | .30       | .00 | .00   | 7.30  | .24  | .00  | 11.19 | 27.01 | .00  | 54.01 | .25 | .30 | .00  | 1.77   |
| IGUSHIK                       | .00       | .00 | .19   | .70   | .00  | .06  | 87.01 | .32   | .16  | 10.76 | .00 | .36 | .74  | 3.96   |
| WOOD                          | .00       | .50 | .50   | 9.72  | .00  | .00  | 76.35 | .96   | .28  | 11.63 | .00 | .06 | .00  | 18.30  |
| NUYAKUK                       | .00       | .30 | 8.34  | 1.96  | .00  | .13  | 86.55 | .16   | .16  | 2.63  | .00 | .07 | .00  | 7.27   |
| NUSHAGAK-MULCHATNA            | .34       | .00 | 46.71 | .00   | .00  | 3.99 | 44.82 | .00   | 2.22 | 1.85  | .00 | .07 | .00  | 5.60   |
| SNAKE                         | .00       | .00 | .91   | 45.86 | .00  | .00  | 37.75 | 4.47  | .00  | 11.01 | .00 | .30 | .00  | .05    |
| SUB-TOTAL<br>NUSHAGAK-IGUSHIK | .05       | .26 | 9.44  | 5.61  | .00  | .67  | 74.59 | .57   | .55  | 8.12  | .00 | .06 | .08  | 35.20  |
| TOGIK                         | .03       | .00 | 2.24  | 10.94 | .00  | .06  | 68.03 | 2.69  | .41  | 15.34 | .00 | .11 | .15  | 7.90   |
| TOTAL BAY                     | .02       | .15 | 3.53  | 0.97  | .50  | .24  | 41.64 | 8.82  | .23  | 35.44 | .05 | .07 | .34  | 100.00 |

TABLE 4 BRISTOL BAY SOCKEYE SALMON RETURN, OCEAN AGE GROUP BY RIVER,  
NUMBER AND PERCENT, 1973

| SYSTEM                     | OCEAN AGE GROUP |         |           |        | TOTAL     |
|----------------------------|-----------------|---------|-----------|--------|-----------|
|                            | 1               | 2       | 3         | 4      |           |
| KVICHAK                    |                 |         |           |        |           |
| NUMBER                     | 7,961           | 157,136 | 82,695    | 553    | 248,345   |
| PERCENT                    | 3.21            | 63.27   | 33.30     | .22    | 10.24     |
| BRANCH                     |                 |         |           |        |           |
| NUMBER                     | 802             | 5,111   | 31,463    | --     | 37,376    |
| PERCENT                    | 2.15            | 13.67   | 84.18     | .00    | 1.54      |
| NAKNEK                     |                 |         |           |        |           |
| NUMBER                     | 3,810           | 99,252  | 397,503   | 473    | 501,038   |
| PERCENT                    | .76             | 19.81   | 79.34     | .09    | 20.66     |
| SUB-TOTAL NAKNEK-KVICHAK   |                 |         |           |        |           |
| NUMBER                     | 12,573          | 251,499 | 511,661   | 1,026  | 786,759   |
| PERCENT                    | 1.60            | 33.24   | 65.03     | .13    | 32.44     |
| EGEGIK                     |                 |         |           |        |           |
| NUMBER                     | 909             | 77,516  | 471,754   | --     | 550,179   |
| PERCENT                    | .16             | 14.09   | 85.75     | .00    | 22.69     |
| UGASHIK                    |                 |         |           |        |           |
| NUMBER                     | 104             | 14,825  | 27,979    | --     | 42,908    |
| PERCENT                    | .24             | 34.55   | 65.21     | .00    | 1.77      |
| IGUSHIK                    |                 |         |           |        |           |
| NUMBER                     | --              | 977     | 95,208    | 280    | 96,465    |
| PERCENT                    | .00             | 1.01    | 98.70     | .29    | 3.98      |
| WOOD                       |                 |         |           |        |           |
| NUMBER                     | 2,214           | 47,409  | 392,612   | 1,493  | 443,728   |
| PERCENT                    | .50             | 10.68   | 88.48     | .34    | 18.30     |
| NUYAKUK                    |                 |         |           |        |           |
| NUMBER                     | --              | 3,742   | 171,838   | 629    | 176,209   |
| PERCENT                    | .00             | 2.12    | 97.52     | .36    | 7.27      |
| NUSHAGAK-MULCHATNA         |                 |         |           |        |           |
| NUMBER                     | --              | 457     | 126,797   | 8,536  | 135,790   |
| PERCENT                    | .00             | .34     | 93.38     | 6.28   | 5.60      |
| SNAKE                      |                 |         |           |        |           |
| NUMBER                     | --              | 608     | 600       | --     | 1,208     |
| PERCENT                    | .00             | 50.33   | 49.67     | .00    | .05       |
| SUB-TOTAL NUSHAGAK-IGUSHIK |                 |         |           |        |           |
| NUMBER                     | 2,214           | 53,193  | 787,055   | 10,938 | 853,400   |
| PERCENT                    | .26             | 6.23    | 92.23     | 1.28   | 35.20     |
| TOGIAK                     |                 |         |           |        |           |
| NUMBER                     | --              | 26,159  | 164,174   | 1,120  | 191,453   |
| PERCENT                    | .00             | 13.66   | 85.75     | .59    | 7.90      |
| TOTAL BAY                  |                 |         |           |        |           |
| NUMBER                     | 15,800          | 433,192 | 1,962,623 | 13,084 | 2,424,699 |
| PERCENT                    | .65             | 17.87   | 80.94     | .54    | 100.00    |

Table 5. Bristol Bay Emergency Order Fishing Periods by District, 1973<sup>1/</sup>

| E. O. #   | Date & Time                   | Hours Open          |
|---|-------------------------------|---------------------|
| <u>NAKNEK-KVICHAK DISTRICT</u>                            |                               |                     |
| 4   | June 27 7 pm - June 28 7 am   | 12                  |
| 9   | July 2 11 am - July 2 11 pm   | 12                  |
| 14 <sup>6/</sup> , 15, 16 <sup>7/</sup>                   | July 17 9 am - July 17 11 pm  | 14                  |
| 18  | July 17 11 pm - July 21 9 am  | 82                  |
| <u>EGEGIK DISTRICT</u>                                    |                               |                     |
| 3   | June 26 4 pm - June 27 4 am   | 12                  |
| 7   | June 30 8 am - June 30 8 pm   | 12                  |
| 11  | July 5 2 pm - July 6 2 am     | 12                  |
| <u>NUSHAGAK DISTRICT</u>                                  |                               |                     |
| 1   | June 19 3 pm - June 20 3 pm   | 24                  |
| 2   | June 22 5 pm - June 23 5 am   | 12                  |
| 5 <sup>2/</sup>   | June 27 8 am - June 27 8 pm   | 12                  |
| 6 <sup>2/</sup>   | June 29 10 am - June 29 10 pm | 12                  |
| 10  | July 3 2 am - July 3 2 pm     | 12                  |
| 13, 14 <sup>6/</sup>                                      | July 16 9 am - July 17 9 am   | 24 <sup>5/</sup>    |
| <u>TOGIK DISTRICT</u> <sup>3/</sup>                       |                               |                     |
| <u>Togiak River Section</u>                               |                               | <u>Hours Closed</u> |
| 8 <sup>4/</sup>   | July 2 9 am - July 4 9 am     | 48                  |
| 12  | July 9 9 am - July 16 9 am    | 7 days              |
| 17  | July 16 9 am - July 18 9 am   | 48                  |
| 19  | July 20 9 am - July 21 9 pm   | 36*                 |
| 20  | July 27 9 am - July 30 9 am   | 72*                 |
| 21  | Aug. 3 9 am - Aug. 4 9 pm     | 36*                 |
| <u>CAPE PEIRCE, OSVIAK, MATOGAK, AND KULUKAK SECTIONS</u> |                               | <u>Hours Closed</u> |
| 12 <sup>4/</sup>  | July 2 9 am - July 16 9 am    | 7 days              |

\* Hours open to fishing.

- 1/ Emergency Order Period: Naknek-Kvichak, Egegik and Ugashik districts 9 am June 23 until 9 am July 17; Nushagak district - 9 am June 16 until 9 am July 17.
- 2/ Igushik Section Only.
- 3/ Togiak River section open 9 am Monday until 9 am Friday, while the Osviak, Matogak, Cape Peirce and Kulukak sections are open 9 am Monday until 9 am Saturday.
- 4/ Togiak River and Kulukak sections only.
- 5/ Fishing continued after 9 am July 17 on a 5-day-per-week basis by regulation.
- 6/ E. O. No. 14 redefines the effective period for sliding gear scale restrictions (5AAC 06.311(d)) to be June 16 through 9 am July 16 in the Nushagak district and June 23 through 9 am July 17 in the Naknek-Kvichak, Egegik, Ugashik and Togiak districts.
- 7/ E. O. No. 16 stipulated that fishing in the Naknek-Kvichak district would be regulated by emergency order during the period 9 am, June 23, through 9 am, July 23.

## NAKNEK-KVICHAK DISTRICT

Despite the prospects of only limited fishing in this district, the gear registration increased considerably over the previous year. A total of 1,678 units were registered this season (1,276 units of drift gear and 402 units of set gear). In compliance with a new regulation, each drift fisherman was limited to 25 fathoms of net while each set net fisherman was limited to 25 fathoms of net while each set net fisherman could use only 12.5 fathoms during the emergency order period (June 23-July 17). Pooling of gear was allowed by licensed gear holders during this period up to a maximum of 150 fathoms of net per boat or 50 fathoms for a set net. This new feature was a major contributor to the increase in gear registration. District boundaries remained unchanged from the previous year.

The timing of the run was normal but test fishing indices both offshore and inside suggested the strength of the run to be considerably above the forecast. Two 12-hour periods were permitted on June 27 and July 2 to test the efficiency of the fleet and the actual strength of the run in the district. By the end of this second period a weakness in the run was evident with an accumulative sockeye catch of only 127,000 to date. No additional fishing time was permitted between the second period and the end of the emergency order period at 9 a.m. on July 17.

The district's season catch of 168,000 sockeye salmon accounted for 22% of the total bay sockeye catch of 761,000. This district's harvest was only 3% of the 18-year average. Sockeye salmon accounted for 57% of the catch of all species. Age composition of the sockeye catch was 11% 4-year fish, 42% 5-year fish, and 47% 6-year fish.

Escapement goals were not achieved in any of the three contributing river systems. The Kvichak River escapement of 226,000 sockeye salmon was only 11% of the goal while the Branch River escapement of 35,000 was 19% of the goal. The escapement into the Naknek River of 357,000 was 45% of its goal.

The king salmon catch of 950 was only 10% of the 20-year average while the chum salmon catch of 124,000 was slightly above the long term average for this species. The coho harvest of 250 was only 14% of the 20-year average. No significant run of pink salmon exists in Bristol Bay during odd-numbered years.

Sockeye salmon harvested in the Naknek-Kvichak district are caught as mixed stocks. The fish in the catch are apportioned to the individual river systems based on the age and sex composition of the catch samples in comparison with the age and sex composition of the escapement samples in the three contributing river systems. The details of this method are described in McCurdy and Schroeder (1968).



TABLE 6 NAKNEK-KVICHAK DISTRICT INSHORE RUN OF SOCKEYE SALMON, AGE GROUP BY SEX, NUMBER AND TOTAL PERCENT, 1973

|                       | 32    | 41  | 42      | 43     | 52      | AGE GROUP<br>53 | 62  | 63      | 73  | 74  | TOTAL   |
|-----------------------|-------|-----|---------|--------|---------|-----------------|-----|---------|-----|-----|---------|
| <b>MALES</b>          |       |     |         |        |         |                 |     |         |     |     |         |
| ESCAPEMENT            | 913   | 227 | 72,510  | 10,696 | 63,525  | 48,650          | 113 | 103,243 | 913 | --  | 300,790 |
| CATCH                 | 51    | 116 | 11,600  | --     | 20,107  | 14,998          | --  | 32,458  | --  | 52  | 78,782  |
| TOTAL                 | 964   | 343 | 83,510  | 10,696 | 83,632  | 63,648          | 113 | 135,701 | 913 | 52  | 379,572 |
| PERCENT               | .26   | .09 | 22.00   | 2.82   | 22.03   | 16.77           | .03 | 35.75   | .24 | .01 | 100.00  |
| <b>FEMALES</b>        |       |     |         |        |         |                 |     |         |     |     |         |
| ESCAPEMENT            | 327   | 339 | 45,982  | 586    | 96,782  | 46,574          | --  | 127,130 | --  | --  | 317,720 |
| CATCH                 | --    | --  | 6,968   | --     | 21,172  | 14,817          | --  | 46,510  | --  | --  | 89,467  |
| TOTAL                 | 327   | 339 | 52,950  | 586    | 117,954 | 61,391          | --  | 173,640 | --  | --  | 407,187 |
| PERCENT               | .98   | .08 | 13.00   | .15    | 28.97   | 15.08           | --  | 42.64   | --  | --  | 100.00  |
| <b>SEXES COMBINED</b> |       |     |         |        |         |                 |     |         |     |     |         |
| ESCAPEMENT            | 1,240 | 566 | 118,492 | 11,282 | 160,307 | 95,224          | 113 | 230,373 | 913 | --  | 618,510 |
| CATCH                 | 51    | 116 | 17,968  | --     | 41,279  | 29,815          | --  | 78,968  | --  | 52  | 168,249 |
| TOTAL                 | 1,291 | 682 | 136,460 | 11,282 | 201,586 | 125,039         | 113 | 309,341 | 913 | 52  | 786,759 |
| PERCENT               | .16   | .09 | 17.35   | 1.43   | 25.62   | 15.89           | .01 | 39.32   | .12 | .01 | 100.00  |

TABLE 7 KVICHAK RIVER APPORTIONED CATCH AND ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SEX, NUMBER AND PERCENT, 1973

|                             | AGE GROUP |     |        |       |        |        |     |        |     |     | TOTAL   |
|-----------------------------|-----------|-----|--------|-------|--------|--------|-----|--------|-----|-----|---------|
|                             | 32        | 41  | 42     | 43    | 52     | 53     | 62  | 63     | 73  | 74  |         |
| <b>CATCH</b>                |           |     |        |       |        |        |     |        |     |     |         |
| <b>MALES</b>                |           |     |        |       |        |        |     |        |     |     |         |
| NUMBER                      | 25        | 116 | 5,052  | --    | 902    | 3,607  | --  | 2,737  | --  | 26  | 12,465  |
| PERCENT                     | .20       | .93 | 40.53  | --    | 7.23   | 28.94  | --  | 21.96  | --  | .21 | 57.20   |
| <b>FEMALES</b>              |           |     |        |       |        |        |     |        |     |     |         |
| NUMBER                      | --        | --  | 2,794  | --    | 1,066  | 3,006  | --  | 2,460  | --  | --  | 9,326   |
| PERCENT                     | --        | --  | 29.96  | --    | 11.43  | 32.23  | --  | 26.38  | --  | --  | 42.00   |
| <b>SEXES COMBINED</b>       |           |     |        |       |        |        |     |        |     |     |         |
| NUMBER                      | 25        | 116 | 7,846  | --    | 1,968  | 6,613  | --  | 5,197  | --  | 26  | 21,791  |
| PERCENT                     | .11       | .53 | 36.01  | --    | 9.63   | 30.35  | --  | 23.85  | --  | .12 | 100.00  |
| <b>ESCAPEMENT</b>           |           |     |        |       |        |        |     |        |     |     |         |
| <b>MALES</b>                |           |     |        |       |        |        |     |        |     |     |         |
| NUMBER                      | 440       | 227 | 55,768 | 7,056 | 9,068  | 27,507 | 113 | 28,462 | 440 | --  | 129,081 |
| PERCENT                     | .34       | .18 | 43.20  | 5.47  | 7.02   | 21.31  | .09 | 22.05  | .34 | --  | 56.98   |
| <b>FEMALES</b>              |           |     |        |       |        |        |     |        |     |     |         |
| NUMBER                      | 327       | 339 | 33,971 | 113   | 11,433 | 25,431 | --  | 25,859 | --  | --  | 97,473  |
| PERCENT                     | .33       | .35 | 34.85  | .12   | 11.73  | 26.09  | --  | 26.53  | --  | --  | 43.02   |
| <b>SEXES COMBINED</b>       |           |     |        |       |        |        |     |        |     |     |         |
| NUMBER                      | 767       | 566 | 89,739 | 7,169 | 20,501 | 52,938 | 113 | 54,321 | 440 | --  | 226,554 |
| PERCENT                     | .34       | .25 | 39.61  | 3.16  | 9.05   | 23.37  | .05 | 23.98  | .19 | --  | 100.00  |
| <b>CATCH AND ESCAPEMENT</b> |           |     |        |       |        |        |     |        |     |     |         |
| <b>MALES</b>                |           |     |        |       |        |        |     |        |     |     |         |
| NUMBER                      | 465       | 343 | 60,820 | 7,056 | 9,970  | 31,114 | 113 | 31,199 | 440 | 26  | 141,546 |
| PERCENT                     | .33       | .24 | 42.97  | 4.99  | 7.04   | 21.98  | .08 | 22.04  | .31 | .02 | 57.00   |
| <b>FEMALES</b>              |           |     |        |       |        |        |     |        |     |     |         |
| NUMBER                      | 327       | 339 | 36,765 | 113   | 12,499 | 28,437 | --  | 28,319 | --  | --  | 106,799 |
| PERCENT                     | .31       | .32 | 34.42  | .10   | 11.70  | 26.63  | --  | 26.52  | --  | --  | 43.00   |
| <b>SEXES COMBINED</b>       |           |     |        |       |        |        |     |        |     |     |         |
| NUMBER                      | 792       | 682 | 97,585 | 7,169 | 22,469 | 59,551 | 113 | 59,518 | 440 | 26  | 248,345 |
| PERCENT                     | .32       | .27 | 39.29  | 2.39  | 9.05   | 23.98  | .04 | 23.97  | .18 | .01 | 100.00  |

TABLE 8 BRANCH RIVER APPORTIONED CATCH AND ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SEX, NUMBER AND PERCENT, 1973

|                             | AGE GROUP |    |       |      |        |       |    |       |    |    | TOTAL  |
|-----------------------------|-----------|----|-------|------|--------|-------|----|-------|----|----|--------|
|                             | 32        | 41 | 42    | 43   | 52     | 53    | 62 | 63    | 73 | 74 |        |
| <b>CATCH</b>                |           |    |       |      |        |       |    |       |    |    |        |
| <b>MALES</b>                |           |    |       |      |        |       |    |       |    |    |        |
| NUMBER                      | --        | -- | 150   | --   | 1,319  | 109   | -- | 239   | -- | -- | 1,817  |
| PERCENT                     | --        | -- | 8.26  | --   | 72.59  | 6.00  | -- | 13.15 | -- | -- | 86.69  |
| <b>FEMALES</b>              |           |    |       |      |        |       |    |       |    |    |        |
| NUMBER                      | --        | -- | 23    | --   | 199    | 17    | -- | 40    | -- | -- | 279    |
| PERCENT                     | --        | -- | 8.24  | --   | 71.33  | 6.09  | -- | 14.34 | -- | -- | 13.31  |
| <b>SEXES COMBINED</b>       |           |    |       |      |        |       |    |       |    |    |        |
| NUMBER                      | --        | -- | 173   | --   | 1,518  | 126   | -- | 279   | -- | -- | 2,096  |
| PERCENT                     | --        | -- | 8.26  | --   | 72.42  | 6.01  | -- | 13.31 | -- | -- | 100.00 |
| <b>ESCAPEMENT</b>           |           |    |       |      |        |       |    |       |    |    |        |
| <b>MALES</b>                |           |    |       |      |        |       |    |       |    |    |        |
| NUMBER                      | --        | -- | 1,604 | 802  | 12,829 | 802   | -- | 2,405 | -- | -- | 18,442 |
| PERCENT                     | --        | -- | 8.70  | 4.35 | 69.56  | 4.35  | -- | 13.04 | -- | -- | 52.27  |
| <b>FEMALES</b>              |           |    |       |      |        |       |    |       |    |    |        |
| NUMBER                      | --        | -- | 1,604 | --   | 12,027 | 802   | -- | 2,405 | -- | -- | 16,838 |
| PERCENT                     | --        | -- | 9.53  | --   | 71.43  | 4.76  | -- | 14.28 | -- | -- | 47.73  |
| <b>SEXES COMBINED</b>       |           |    |       |      |        |       |    |       |    |    |        |
| NUMBER                      | --        | -- | 3,208 | 802  | 24,856 | 1,604 | -- | 4,810 | -- | -- | 35,280 |
| PERCENT                     | --        | -- | 9.09  | 2.27 | 70.45  | 4.55  | -- | 13.64 | -- | -- | 100.00 |
| <b>CATCH AND ESCAPEMENT</b> |           |    |       |      |        |       |    |       |    |    |        |
| <b>MALES</b>                |           |    |       |      |        |       |    |       |    |    |        |
| NUMBER                      | --        | -- | 1,754 | 802  | 14,148 | 911   | -- | 2,644 | -- | -- | 20,259 |
| PERCENT                     | --        | -- | 8.66  | 3.96 | 69.83  | 4.50  | -- | 13.05 | -- | -- | 54.20  |
| <b>FEMALES</b>              |           |    |       |      |        |       |    |       |    |    |        |
| NUMBER                      | --        | -- | 1,627 | --   | 12,226 | 819   | -- | 2,445 | -- | -- | 17,117 |
| PERCENT                     | --        | -- | 9.51  | --   | 71.43  | 4.76  | -- | 14.28 | -- | -- | 45.80  |
| <b>SEXES COMBINED</b>       |           |    |       |      |        |       |    |       |    |    |        |
| NUMBER                      | --        | -- | 3,381 | 802  | 26,374 | 1,730 | -- | 5,089 | -- | -- | 37,376 |
| PERCENT                     | --        | -- | 9.05  | 2.15 | 70.56  | 4.63  | -- | 13.61 | -- | -- | 100.00 |

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TABLE 9 NAKNEK RIVER APPORTIONED CATCH AND ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SEX, NUMBER AND PERCENT, 1973

|                             | AGE GROUP |    |        |       |         |        |    |         |     |     | TOTAL   |
|-----------------------------|-----------|----|--------|-------|---------|--------|----|---------|-----|-----|---------|
|                             | 32        | 41 | 42     | 43    | 52      | 53     | 62 | 63      | 73  | 74  |         |
| <b>CATCH</b>                |           |    |        |       |         |        |    |         |     |     |         |
| <b>MALES</b>                |           |    |        |       |         |        |    |         |     |     |         |
| NUMBER                      | 26        | -- | 5,798  | --    | 17,886  | 11,282 | -- | 29,482  | --  | 26  | 64,500  |
| PERCENT                     | .04       | -- | 8.99   | --    | 27.73   | 17.49  | -- | 45.71   | --  | .04 | 44.68   |
| <b>FEMALES</b>              |           |    |        |       |         |        |    |         |     |     |         |
| NUMBER                      | --        | -- | 4,151  | --    | 19,907  | 11,794 | -- | 44,010  | --  | --  | 79,862  |
| PERCENT                     | --        | -- | 5.20   | --    | 24.92   | 14.77  | -- | 55.11   | --  | --  | 55.32   |
| <b>SEXES COMBINED</b>       |           |    |        |       |         |        |    |         |     |     |         |
| NUMBER                      | 26        | -- | 9,949  | --    | 37,793  | 23,076 | -- | 73,492  | --  | 26  | 144,362 |
| PERCENT                     | .02       | -- | 6.89   | --    | 25.18   | 15.98  | -- | 50.91   | --  | .02 | 100.00  |
| <b>ESCAPEMENT</b>           |           |    |        |       |         |        |    |         |     |     |         |
| <b>MALES</b>                |           |    |        |       |         |        |    |         |     |     |         |
| NUMBER                      | 473       | -- | 15,138 | 2,833 | 41,628  | 20,341 | -- | 72,376  | 473 | --  | 153,267 |
| PERCENT                     | .31       | -- | 9.88   | 1.85  | 27.16   | 13.27  | -- | 47.22   | .31 | --  | 42.97   |
| <b>FEMALES</b>              |           |    |        |       |         |        |    |         |     |     |         |
| NUMBER                      | --        | -- | 10,407 | 473   | 73,322  | 20,341 | -- | 98,866  | --  | --  | 203,409 |
| PERCENT                     | --        | -- | 5.12   | .23   | 36.05   | 10.00  | -- | 48.60   | --  | --  | 57.03   |
| <b>SEXES COMBINED</b>       |           |    |        |       |         |        |    |         |     |     |         |
| NUMBER                      | 473       | -- | 25,545 | 3,311 | 114,950 | 40,682 | -- | 171,242 | 473 | --  | 356,676 |
| PERCENT                     | .13       | -- | 7.16   | .93   | 32.23   | 11.41  | -- | 48.01   | .13 | --  | 100.00  |
| <b>CATCH AND ESCAPEMENT</b> |           |    |        |       |         |        |    |         |     |     |         |
| <b>MALES</b>                |           |    |        |       |         |        |    |         |     |     |         |
| NUMBER                      | 499       | -- | 20,936 | 2,833 | 59,514  | 31,623 | -- | 101,858 | 473 | 26  | 217,767 |
| PERCENT                     | .23       | -- | 9.62   | 1.31  | 27.33   | 14.52  | -- | 46.77   | .22 | .01 | 43.46   |
| <b>FEMALES</b>              |           |    |        |       |         |        |    |         |     |     |         |
| NUMBER                      | --        | -- | 14,558 | 473   | 93,229  | 32,135 | -- | 142,876 | --  | --  | 283,271 |
| PERCENT                     | --        | -- | 5.14   | .17   | 32.91   | 11.34  | -- | 50.44   | --  | --  | 56.54   |
| <b>SEXES COMBINED</b>       |           |    |        |       |         |        |    |         |     |     |         |
| NUMBER                      | 499       | -- | 35,494 | 3,311 | 152,743 | 63,758 | -- | 244,734 | 473 | 26  | 501,038 |
| PERCENT                     | .10       | -- | 7.08   | .66   | 30.49   | 12.72  | -- | 48.85   | .09 | .01 | 100.00  |

TABLE 10 NAKNEK-KVICHAK DISTRICT COMMERCIAL CATCH OF SOCKEYE SALMON, SEX COMPOSITION BY SAMPLE PERIOD, 1973

| PERIOD<br>NUMBER | DATE        | NO. OF FISH<br>SAMPLED | COUNT |         | PERCENT |         | CATCH   | NUMBER IN CATCH |         |
|------------------|-------------|------------------------|-------|---------|---------|---------|---------|-----------------|---------|
|                  |             |                        | MALES | FEMALES | MALES   | FEMALES |         | MALES           | FEMALES |
| 1                | 01/01-06/26 | 340                    | 200   | 140     | 58.82   | 41.18   | 17,547  | 10,322          | 7,225   |
| 2                | 06/27-07/01 | 383                    | 166   | 217     | 43.34   | 56.66   | 24,578  | 10,653          | 13,925  |
| 3                | 07/02-12/31 | 504                    | 231   | 273     | 45.83   | 54.17   | 126,124 | 57,807          | 68,317  |
| TOTAL            |             | 1,227                  | 597   | 630     | 46.82   | 53.18   | 168,249 | 78,782          | 89,467  |

TABLE 11 NAKNEK-KVICHAK DISTRICT COMMERCIAL CATCH OF SOCKEYE SALMON, AGE GROUP BY SAMPLE PERIOD AND SEX, NUMBER AND PERCENT, 1973

| SAMPLE PERIOD  | DATE            |         | AGE GROUP |     |        |        |        |        |     | TOTAL   |
|----------------|-----------------|---------|-----------|-----|--------|--------|--------|--------|-----|---------|
|                |                 |         | 32        | 41  | 42     | 52     | 53     | 63     | 74  |         |
| MALES          |                 |         |           |     |        |        |        |        |     |         |
| 1              | 01/01-<br>06/26 | COUNT   | 51        | 52  | 2,838  | 1,961  | 2,684  | 2,684  | 52  | 10,322  |
|                |                 | PERCENT | .50       | .50 | 27.50  | 19.00  | 26.00  | 26.00  | .50 | 13.10   |
| 2              | 06/27-<br>07/01 | COUNT   | --        | 64  | 1,155  | 2,631  | 2,054  | 4,749  | --  | 10,653  |
|                |                 | PERCENT | --        | .60 | 10.84  | 24.70  | 19.28  | 44.58  | --  | 13.52   |
| 3              | 07/02-<br>12/31 | COUNT   | --        | --  | 7,007  | 15,515 | 10,260 | 25,025 | --  | 57,807  |
|                |                 | PERCENT | --        | --  | 12.12  | 26.84  | 17.75  | 43.29  | --  | 73.38   |
| COLUMN TOTALS  |                 | COUNT   | 51        | 116 | 11,000 | 20,107 | 14,998 | 32,458 | 52  | 78,782  |
|                |                 | PERCENT | .06       | .15 | 13.96  | 25.52  | 19.04  | 41.20  | .07 | 100.00  |
| FEMALES        |                 |         |           |     |        |        |        |        |     |         |
| 1              | 01/01-<br>06/26 | COUNT   | --        | --  | 1,135  | 1,755  | 1,445  | 2,890  | --  | 7,225   |
|                |                 | PERCENT | --        | --  | 15.71  | 24.29  | 20.00  | 40.00  | --  | 8.08    |
| 2              | 06/27-<br>07/01 | COUNT   | --        | --  | 578    | 3,401  | 1,861  | 8,085  | --  | 13,925  |
|                |                 | PERCENT | --        | --  | 4.15   | 24.42  | 13.36  | 58.06  | --  | 15.56   |
| 3              | 07/02-<br>12/31 | COUNT   | --        | --  | 5,255  | 16,016 | 11,511 | 35,535 | --  | 68,317  |
|                |                 | PERCENT | --        | --  | 7.69   | 23.44  | 16.85  | 52.01  | --  | 76.36   |
| COLUMN TOTALS  |                 | COUNT   | --        | --  | 6,968  | 21,172 | 14,817 | 46,510 | --  | 89,467  |
|                |                 | PERCENT | --        | --  | 7.79   | 23.66  | 16.56  | 51.99  | --  | 100.00  |
| SEXES COMBINED |                 |         |           |     |        |        |        |        |     |         |
| 1              | 01/01-<br>06/26 | COUNT   | 51        | 52  | 3,973  | 3,716  | 4,129  | 5,574  | 52  | 17,547  |
|                |                 | PERCENT | .29       | .30 | 22.64  | 21.18  | 23.53  | 31.76  | .30 | 10.43   |
| 2              | 06/27-<br>07/01 | COUNT   | --        | 64  | 1,733  | 6,032  | 3,915  | 12,834 | --  | 24,578  |
|                |                 | PERCENT | --        | .26 | 7.05   | 24.54  | 15.93  | 52.22  | --  | 14.61   |
| 3              | 07/02-<br>12/31 | COUNT   | --        | --  | 12,262 | 31,531 | 21,771 | 60,560 | --  | 126,124 |
|                |                 | PERCENT | --        | --  | 9.72   | 25.00  | 17.26  | 48.02  | --  | 74.96   |
| COLUMN TOTALS  |                 | COUNT   | 51        | 116 | 17,968 | 41,279 | 29,815 | 78,968 | 52  | 168,249 |
|                |                 | PERCENT | .03       | .07 | 10.68  | 24.53  | 17.72  | 46.94  | .03 | 100.00  |

TABLE 12 KVICHAK RIVER DAILY SOCKEYE SALMON  
ESCAPEMENT COUNTS, 1973

| DATE    | DAILY<br>COUNT   | ACCUMULATIVE<br>COUNT | DAILY PERCENT<br>OF TOTAL | ACCUMULATIVE<br>PERCENT |
|---------|------------------|-----------------------|---------------------------|-------------------------|
| JUNE 23 | 0                | 0                     | 0.00                      | 0.00                    |
| 24      | 144              | 144                   | .06                       | .06                     |
| 25      | 108              | 252                   | .05                       | .11                     |
| 26      | 510              | 762                   | .23                       | .34                     |
| 27      | 456              | 1,218                 | .20                       | .54                     |
| 28      | 582              | 1,800                 | .26                       | .80                     |
| 29      | 1,014            | 2,814                 | .45                       | 1.25                    |
| 30      | 804 <sup>1</sup> | 3,618                 | .36                       | 1.61                    |
| JULY 1  | 594              | 4,212                 | .26                       | 1.87                    |
| 2       | 2,616            | 6,828                 | 1.15                      | 3.02                    |
| 3       | 3,918            | 10,746                | 1.73                      | 4.75                    |
| 4       | 4,794            | 15,540                | 2.12                      | 6.87                    |
| 5       | 2,394            | 17,934                | .92                       | 7.79                    |
| 6       | 2,874            | 20,808                | 1.27                      | 9.06                    |
| 7       | 6,258            | 26,766                | 2.76                      | 11.82                   |
| 8       | 21,666           | 48,432                | 9.56                      | 21.38                   |
| 9       | 63,402           | 111,834               | 27.99                     | 49.37                   |
| 10      | 57,552           | 169,386               | 25.40                     | 74.77                   |
| 11      | 25,962           | 195,348               | 11.46                     | 86.23                   |
| 12      | 6,252            | 201,600               | 2.76                      | 88.99                   |
| 13      | 3,198            | 204,798               | 1.41                      | 90.40                   |
| 14      | 2,164            | 206,962               | .96                       | 91.36                   |
| 15      | 1,544            | 208,506               | .46                       | 91.82                   |
| 16      | 1,410            | 209,916               | .62                       | 92.44                   |
| 17      | 2,562            | 211,978               | 1.13                      | 93.57                   |
| 18      | 768              | 212,746               | .34                       | 93.91                   |
| 19      | 10,116           | 222,862               | 4.47                      | 98.38                   |
| 20      | 2,976            | 225,838               | 1.31                      | 99.69                   |
| 21      | 552              | 226,390               | .24                       | 99.93                   |
| 22      | 126              | 226,516               | .06                       | 99.99                   |
| 23      | 18               | 226,534               | .01                       | 100.00                  |

FOOTNOTES

1. AVERAGE BETWEEN PREVIOUS AND FOLLOWING DAYS.  
ZERO VISIBILITY.

TABLE 13 KVICHAK RIVER ESCAPEMENT OF SOCKEYE SALMON, SEX COMPOSITION BY SAMPLE PERIOD, 1973

| PERIOD<br>NUMBER | DATE        | NO. OF FISH<br>SAMPLED | COUNT |         | PERCENT |         | ESCAPEMENT | NUMBER IN ESCAPEMENT |         |
|------------------|-------------|------------------------|-------|---------|---------|---------|------------|----------------------|---------|
|                  |             |                        | MALES | FEMALES | MALES   | FEMALES |            | MALES                | FEMALES |
| 1                | 06/23-07/10 | 518                    | 276   | 242     | 53.28   | 46.72   | 169,386    | 90,252               | 79,134  |
| 2                | 07/11-07/23 | 505                    | 343   | 162     | 67.92   | 32.08   | 57,168     | 38,829               | 18,339  |
| TOTAL            |             | 1,023                  | 619   | 404     | 56.98   | 43.02   | 226,554    | 129,081              | 97,473  |

TABLE 14 KVICHAK RIVER ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SAMPLE PERIOD AND SEX,  
NUMBER AND PERCENT, 1973

| SAMPLE PERIOD  | DATE            |         | AGE GROUP |      |        |       |        |        |     |        | TOTAL |         |
|----------------|-----------------|---------|-----------|------|--------|-------|--------|--------|-----|--------|-------|---------|
|                |                 |         | 32        | 41   | 42     | 43    | 52     | 53     | 62  | 63     |       | 73      |
| MALES          |                 |         |           |      |        |       |        |        |     |        |       |         |
| 1              | 06/23-<br>07/10 | COUNT   | 327       | --   | 36,297 | 4,905 | 5,559  | 20,601 | --  | 22,236 | 327   | 90,252  |
|                |                 | PERCENT | .36       | --   | 40.22  | 5.43  | 6.16   | 22.83  | --  | 24.64  | .36   | 69.92   |
| 2              | 07/11-<br>07/23 | COUNT   | 113       | 227  | 19,471 | 2,151 | 3,509  | 6,906  | 113 | 6,226  | 113   | 38,829  |
|                |                 | PERCENT | .29       | .58  | 50.15  | 5.54  | 9.04   | 17.78  | .29 | 16.03  | .29   | 30.08   |
| COLUMN TOTALS  |                 | COUNT   | 440       | 227  | 55,768 | 7,056 | 9,068  | 27,507 | 113 | 28,462 | 440   | 129,081 |
|                |                 | PERCENT | .34       | .18  | 43.20  | 5.47  | 7.02   | 21.31  | .09 | 22.05  | .34   | 100.00  |
| FEMALES        |                 |         |           |      |        |       |        |        |     |        |       |         |
| 1              | 06/23-<br>07/10 | COUNT   | 327       | --   | 29,103 | --    | 8,829  | 21,582 | --  | 19,293 | --    | 79,134  |
|                |                 | PERCENT | .41       | --   | 36.78  | --    | 11.16  | 27.27  | --  | 24.38  | --    | 81.19   |
| 2              | 07/11-<br>07/23 | COUNT   | --        | 339  | 4,868  | 113   | 2,604  | 3,849  | --  | 6,566  | --    | 18,339  |
|                |                 | PERCENT | --        | 1.85 | 26.54  | .62   | 14.20  | 20.99  | --  | 35.80  | --    | 18.81   |
| COLUMN TOTALS  |                 | COUNT   | 327       | 339  | 33,971 | 113   | 11,433 | 25,431 | --  | 25,859 | --    | 97,473  |
|                |                 | PERCENT | .33       | .35  | 34.85  | .12   | 11.73  | 26.09  | --  | 26.53  | --    | 100.00  |
| SEXES COMBINED |                 |         |           |      |        |       |        |        |     |        |       |         |
| 1              | 06/23-<br>07/10 | COUNT   | 654       | --   | 65,400 | 4,905 | 14,388 | 42,183 | --  | 41,529 | 327   | 169,386 |
|                |                 | PERCENT | .39       | --   | 38.61  | 2.90  | 8.49   | 24.90  | --  | 24.52  | .19   | 74.77   |
| 2              | 07/11-<br>07/23 | COUNT   | 113       | 566  | 24,339 | 2,264 | 6,113  | 10,755 | 113 | 12,792 | 113   | 57,168  |
|                |                 | PERCENT | .20       | .99  | 42.57  | 3.96  | 10.69  | 18.81  | .20 | 22.38  | .20   | 25.23   |
| COLUMN TOTALS  |                 | COUNT   | 767       | 566  | 89,739 | 7,169 | 20,501 | 52,938 | 113 | 54,321 | 440   | 226,554 |
|                |                 | PERCENT | .34       | .25  | 39.61  | 3.16  | 9.05   | 23.37  | .05 | 23.98  | .19   | 100.00  |

TABLE 15 BRANCH RIVER DAILY SOCKEYE SALMON  
ESCAPEMENT COUNTS, 1973

| DATE   | DAILY<br>COUNT | ACCUMULATIVE<br>COUNT | DAILY PERCENT<br>OF TOTAL | ACCUMULATIVE<br>PERCENT |
|--------|----------------|-----------------------|---------------------------|-------------------------|
| JULY 5 | 0              | 0                     | 0.00                      | 0.00                    |
| 6      | 1,284          | 1,284                 | 3.64                      | 3.64                    |
| 7      | 3,978          | 5,262                 | 11.28                     | 14.92                   |
| 8      | 11,826         | 17,088                | 33.52                     | 48.44                   |
| 9      | 11,100         | 28,188                | 31.46                     | 79.90                   |
| 10     | 5,880          | 34,068                | 16.67                     | 96.57                   |
| 11     | 468            | 34,536                | 1.33                      | 97.90                   |
| 12     | 474            | 35,010                | 1.34                      | 99.24                   |
| 13     | 270            | 35,280                | .76                       | 100.00                  |

TABLE 16 BRANCH RIVER ESCAPEMENT OF SOCKEYE SALMON, SEX COMPOSITION BY SAMPLE PERIOD, 1973

| PERIOD<br>NUMBER | DATE        | NO. OF FISH<br>SAMPLED | COUNT |         | PERCENT |         | ESCAPEMENT | NUMBER IN ESCAPEMENT |         |
|------------------|-------------|------------------------|-------|---------|---------|---------|------------|----------------------|---------|
|                  |             |                        | MALES | FEMALES | MALES   | FEMALES |            | MALES                | FEMALES |
| 1                | 07/05-07/13 | 44                     | 23    | 21      | 52.27   | 47.73   | 35,280     | 18,442               | 16,838  |

TABLE 17 NAKNEK RIVER DAILY SOCKEYE SALMON  
ESCAPEMENT COUNTS, 1973

| DATE    | DAILY<br>COUNT | ACCUMULATIVE<br>COUNT | DAILY PERCENT<br>OF TOTAL | ACCUMULATIVE<br>PERCENT |
|---------|----------------|-----------------------|---------------------------|-------------------------|
| JUNE 23 | 0              | 0                     | 0.00                      | 0.00                    |
| 24      | 60             | 60                    | .02                       | .02                     |
| 25      | 1,452          | 1,512                 | .41                       | .43                     |
| 26      | 816            | 2,328                 | .23                       | .66                     |
| 27      | 8,694          | 11,022                | 2.44                      | 3.10                    |
| 28      | 10,980         | 22,002                | 3.08                      | 6.18                    |
| 29      | 2,874          | 24,876                | .81                       | 6.99                    |
| 30      | 2,526          | 27,402                | .71                       | 7.70                    |
| JULY 1  | 11,466         | 38,868                | 3.21                      | 10.91                   |
| 2       | 4,392          | 43,260                | 1.23                      | 12.14                   |
| 3       | 10,002         | 53,262                | 2.80                      | 14.94                   |
| 4       | 13,656         | 66,918                | 3.83                      | 18.77                   |
| 5       | 28,476         | 95,394                | 7.98                      | 26.75                   |
| 6       | 31,800         | 127,194               | 8.92                      | 35.67                   |
| 7       | 39,928         | 217,122               | 25.21                     | 60.88                   |
| 8       | 47,208         | 264,330               | 13.24                     | 74.12                   |
| 9       | 34,788         | 299,118               | 9.75                      | 83.87                   |
| 10      | 1,200 1        | 300,318               | .34                       | 84.21                   |
| 11      | 4,152 1        | 304,470               | 1.16                      | 85.37                   |
| 12      | 4,812          | 309,282               | 1.35                      | 86.72                   |
| 13      | 13,578         | 322,860               | 3.81                      | 90.53                   |
| 14      | 18,174         | 341,034               | 5.09                      | 95.62                   |
| 15      | 4,536          | 345,570               | 1.27                      | 96.89                   |
| 16      | 388            | 346,458               | .25                       | 97.14                   |
| 17      | 3,756          | 350,214               | 1.05                      | 98.19                   |
| 18      | 3,798          | 354,012               | 1.06                      | 99.25                   |
| 19      | 1,002          | 355,014               | .28                       | 99.53                   |
| 20      | 630            | 355,644               | .18                       | 99.71                   |
| 21      | 462            | 356,106               | .13                       | 99.84                   |
| 22      | 372            | 356,478               | .10                       | 99.94                   |
| 23      | 198            | 356,676               | .06                       | 100.00                  |

FOOTNOTES

1. EXPANDED DATA DUE TO POOR COUNTING CONDITIONS.

TABLE 18 NAKNEK RIVER ESCAPEMENT OF SOCKEYE SALMON, SEX COMPOSITION BY SAMPLE PERIOD, 1973

| PERIOD<br>NUMBER | DATE        | NO. OF FISH<br>SAMPLED | COUNT |         | PERCENT |         | ESCAPEMENT | NUMBER IN ESCAPEMENT |         |
|------------------|-------------|------------------------|-------|---------|---------|---------|------------|----------------------|---------|
|                  |             |                        | MALES | FEMALES | MALES   | FEMALES |            | MALES                | FEMALES |
| 1                | 06/23-07/23 | 754                    | 324   | 430     | 42.97   | 57.03   | 356,676    | 153,267              | 203,409 |

## EGEGIK DISTRICT

With the forecast of a commercial harvest larger than most of the other districts in Bristol Bay in 1973, gear registration was up considerably from the previous year. Of the 577 units of gear registered, 404 were for drift gear and the remaining 173 were set gear. The 47% increase in total gear over that of 1972 was due primarily to an additional 172 units of drift gear. Also contributing to a rise in registration was a new regulation that limited drift net fishermen to 12.5 fathoms of net per gear holder and set net fishermen to 12.5 fathoms each during the emergency order period (June 23 - July 17). Pooling of gear was allowed by licensed gear holders during this period up to a maximum of 150 fathoms of net per boat or 50 fathoms for a set net.

The size of the Egegik district was enlarged slightly this year as a result of a 1/2-mile westward extension of the northern boundary to provide more area in the northwestern corner of the district.

Run timing was normal but the typical surge of fish near the peak of the run failed to materialize and it became apparent by the first week in July that the return would not materialize as forecasted. Conflicting evidence from both offshore and inside test fishing programs required a cautious approach to management of the run. Two 12-hour periods were allowed early in the emergency order period followed by a third 12-hour period near the peak with fairly long closures in between. No additional fishing was allowed until the end of the emergency order period when fishing was resumed on a 5-day per week basis.

The first 12-hour period on June 26 was permitted to test the strength of the run as it built up in the district and to also provide some indication of the efficiency of the fleet. The sockeye catch during this period was 27,000 and brought the accumulative catch for the district to 52,000.

A second 12-hour period was announced for June 29-30 since it appeared a fair balance of catch and escapement was being achieved and the peak had not yet reached the district. This period produced a catch of 70,000.

The third period was announced for July 5 and produced a peak catch of 90,000 but also indicated that the run would not be as large as forecasted. By July 9 it was apparent that escapements were not building at a rate needed to achieve required escapement goals and so a general announcement was made that no further fishing time was anticipated prior to the end of the emergency order period on July 17. Fishing resumed on a 5-day-a-week basis after that time but only 8,000 additional sockeye salmon were caught.

The district's cumulative sockeye catch of 221,000 was 29% of the total bay catch of 761,000 for that species. This district harvest was only 18% of the 20-year average. Sockeye salmon accounted for 89% of the catch of all species. Age composition of the catch was 2% 4-year fish, 20% 5-year fish, and about 78% 6-year fish.

The escapement goal was not achieved in this system. The final escapement of 329,000 was only 66% of the goal.

The king salmon catch of 1,500 was only 49% of the 20-year harvest while the chum salmon catch of 23,000 was about 83% of the long term historical average. The coho salmon harvest of 2,700 was 84% of the 20-year average harvest for this species. Only insignificant numbers of pink salmon are caught in Bristol Bay during odd-numbered years.

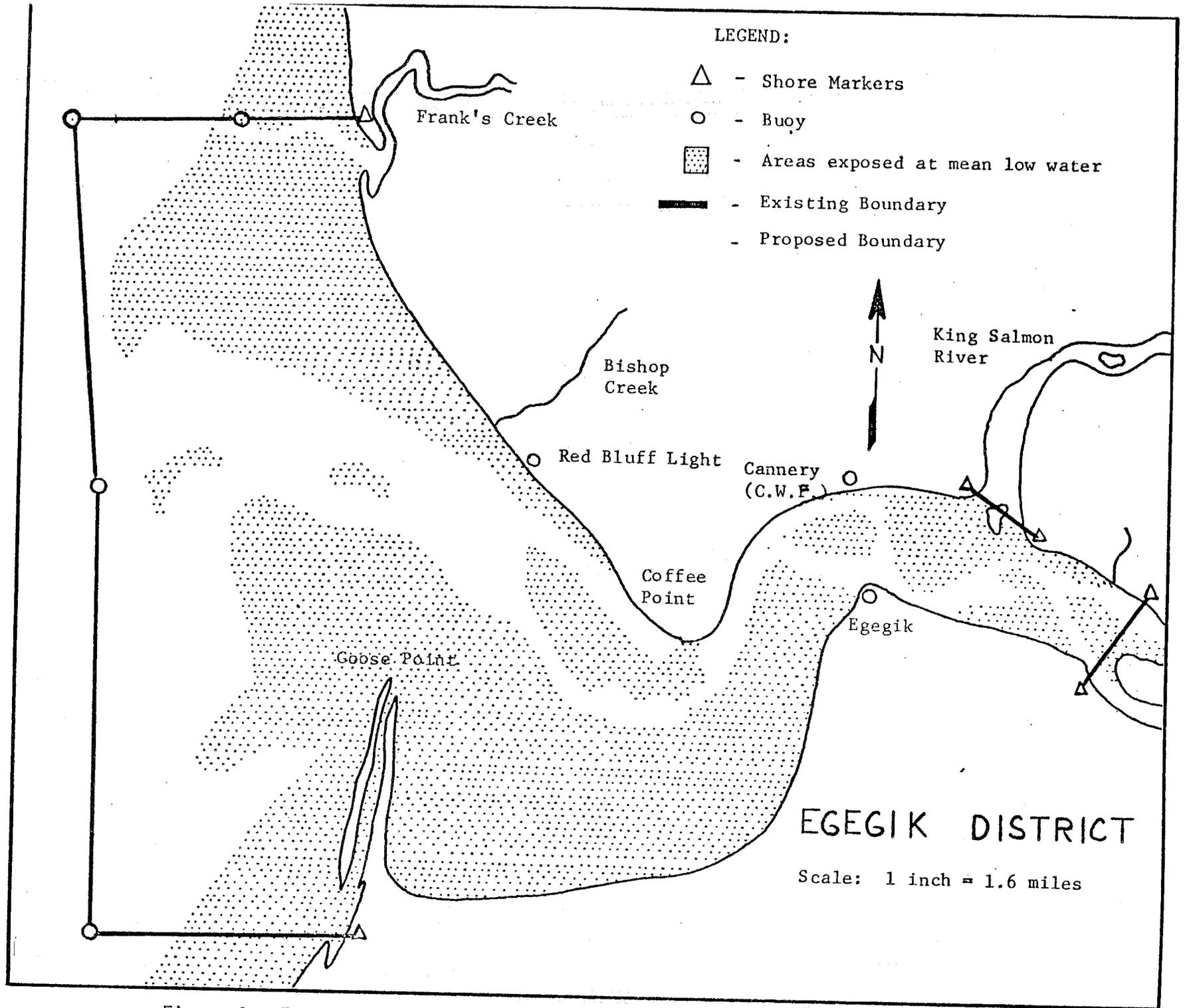


Figure 3. Egegik District commercial fishing boundaries, 1973.

TABLE 19 EGEKIK RIVER CATCH AND ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SEX, NUMBER AND PERCENT, 1973

|                             | 32  | 42    | 43  | 52     | AGE GROUP<br>53 | 63      | 64    | 74    | TOTAL   |
|-----------------------------|-----|-------|-----|--------|-----------------|---------|-------|-------|---------|
| <b>CATCH</b>                |     |       |     |        |                 |         |       |       |         |
| <b>MALES</b>                |     |       |     |        |                 |         |       |       |         |
| NUMBER                      | --  | 2,886 | --  | 7,703  | 15,228          | 78,805  | --    | --    | 104,622 |
| PERCENT                     | --  | 2.76  | --  | 7.36   | 14.56           | 75.32   | --    | --    | 47.27   |
| <b>FEMALES</b>              |     |       |     |        |                 |         |       |       |         |
| NUMBER                      | 124 | 1,910 | --  | 6,782  | 15,089          | 92,686  | --    | 124   | 116,715 |
| PERCENT                     | .10 | 1.64  | --  | 5.81   | 12.93           | 79.41   | --    | .11   | 52.73   |
| <b>SEXES COMBINED</b>       |     |       |     |        |                 |         |       |       |         |
| NUMBER                      | 124 | 4,796 | --  | 14,485 | 30,317          | 171,491 | --    | 124   | 221,337 |
| PERCENT                     | .05 | 2.17  | --  | 6.54   | 13.70           | 77.48   | --    | .06   | 100.00  |
| <b>ESCAPEMENT</b>           |     |       |     |        |                 |         |       |       |         |
| <b>MALES</b>                |     |       |     |        |                 |         |       |       |         |
| NUMBER                      | --  | 3,865 | 785 | 11,045 | 19,323          | 122,562 | 1,157 | 2,227 | 159,964 |
| PERCENT                     | --  | 2.42  | .49 | 6.28   | 12.08           | 76.62   | .72   | 1.39  | 48.64   |
| <b>FEMALES</b>              |     |       |     |        |                 |         |       |       |         |
| NUMBER                      | --  | 481   | --  | 11,946 | 17,577          | 134,156 | --    | 4,718 | 168,873 |
| PERCENT                     | --  | .29   | --  | 7.07   | 10.41           | 79.44   | --    | 2.79  | 51.36   |
| <b>SEXES COMBINED</b>       |     |       |     |        |                 |         |       |       |         |
| NUMBER                      | --  | 4,346 | 785 | 21,991 | 36,900          | 256,718 | 1,157 | 6,945 | 328,842 |
| PERCENT                     | --  | 1.32  | .24 | 6.69   | 11.22           | 78.07   | .35   | 2.11  | 100.00  |
| <b>CATCH AND ESCAPEMENT</b> |     |       |     |        |                 |         |       |       |         |
| <b>MALES</b>                |     |       |     |        |                 |         |       |       |         |
| NUMBER                      | --  | 6,751 | 785 | 17,748 | 34,551          | 201,367 | 1,157 | 2,227 | 264,586 |
| PERCENT                     | --  | 2.55  | .30 | 6.71   | 13.06           | 76.10   | .44   | .84   | 48.09   |
| <b>FEMALES</b>              |     |       |     |        |                 |         |       |       |         |
| NUMBER                      | 124 | 2,331 | --  | 18,728 | 32,666          | 226,842 | --    | 4,842 | 285,593 |
| PERCENT                     | .04 | .84   | --  | 6.56   | 11.44           | 79.43   | --    | 1.69  | 51.91   |
| <b>SEXES COMBINED</b>       |     |       |     |        |                 |         |       |       |         |
| NUMBER                      | 124 | 9,142 | 785 | 36,476 | 67,217          | 428,209 | 1,157 | 7,069 | 550,179 |
| PERCENT                     | .02 | 1.66  | .14 | 6.63   | 12.22           | 77.83   | .21   | 1.29  | 100.00  |

TABLE 20 EGEK DISTRICT COMMERCIAL CATCH OF SOCKEYE SALMON, SEX COMPOSITION BY SAMPLE PERIOD, 1973

| PERIOD<br>NUMBER | DATE        | NO. OF FISH<br>SAMPLED | COUNT |         | PERCENT |         | CATCH   | NUMBER IN CATCH |         |
|------------------|-------------|------------------------|-------|---------|---------|---------|---------|-----------------|---------|
|                  |             |                        | MALES | FEMALES | MALES   | FEMALES |         | MALES           | FEMALES |
| 1                | 01/01-06/29 | 423                    | 198   | 225     | 46.81   | 53.19   | 52,351  | 24,505          | 27,846  |
| 2                | 06/30-12/31 | 502                    | 238   | 264     | 47.41   | 52.59   | 168,986 | 80,117          | 88,869  |
| TOTAL            |             | 925                    | 436   | 489     | 47.27   | 52.73   | 221,337 | 104,622         | 116,715 |

TABLE 21 EGEKIK DISTRICT COMMERCIAL CATCH OF SOGKEYE SALMON, AGE GROUP BY SAMPLE PERIOD AND SEX, NUMBER AND PERCENT, 1973

| SAMPLE PERIOD         | DATE   |         | AGE GROUP |       |        |        |         | TOTAL |         |
|-----------------------|--------|---------|-----------|-------|--------|--------|---------|-------|---------|
|                       |        |         | 32        | 42    | 52     | 53     | 63      |       | 74      |
| <b>MALES</b>          |        |         |           |       |        |        |         |       |         |
| 1                     | 01/01- | COUNT   | --        | 866   | 1,980  | 4,456  | 17,203  | --    | 24,505  |
|                       | 06/29  | PERCENT | --        | 3.54  | 8.08   | 18.18  | 70.20   | --    | 23.42   |
| 2                     | 06/30- | COUNT   | --        | 2,020 | 5,723  | 10,772 | 61,602  | --    | 80,117  |
|                       | 12/31  | PERCENT | --        | 2.52  | 7.14   | 13.45  | 76.89   | --    | 73.58   |
| <b>COLUMN TOTALS</b>  |        | COUNT   | --        | 2,886 | 7,703  | 15,228 | 78,805  | --    | 104,622 |
|                       |        | PERCENT | --        | 2.76  | 7.36   | 14.56  | 75.32   | --    | 100.00  |
| <b>FEMALES</b>        |        |         |           |       |        |        |         |       |         |
| 1                     | 01/01- | COUNT   | 124       | 1,237 | 1,733  | 2,970  | 21,658  | 124   | 27,846  |
|                       | 06/29  | PERCENT | .44       | 4.44  | 6.22   | 10.67  | 77.78   | .44   | 23.86   |
| 2                     | 06/30- | COUNT   | --        | 673   | 5,049  | 12,119 | 71,028  | --    | 88,869  |
|                       | 12/31  | PERCENT | --        | .76   | 5.68   | 13.64  | 79.92   | --    | 76.14   |
| <b>COLUMN TOTALS</b>  |        | COUNT   | 124       | 1,910 | 6,782  | 15,089 | 92,686  | 124   | 116,715 |
|                       |        | PERCENT | .10       | 1.64  | 5.81   | 12.93  | 79.41   | .11   | 100.00  |
| <b>SEXES COMBINED</b> |        |         |           |       |        |        |         |       |         |
| 1                     | 01/01- | COUNT   | 124       | 2,103 | 3,713  | 7,426  | 38,861  | 124   | 52,351  |
|                       | 06/29  | PERCENT | .24       | 4.02  | 7.09   | 14.18  | 74.23   | .24   | 23.65   |
| 2                     | 06/30- | COUNT   | --        | 2,693 | 10,772 | 22,891 | 132,630 | --    | 168,986 |
|                       | 12/31  | PERCENT | --        | 1.59  | 6.37   | 13.55  | 78.49   | --    | 76.35   |
| <b>COLUMN TOTALS</b>  |        | COUNT   | 124       | 4,796 | 14,485 | 30,317 | 171,491 | 124   | 221,337 |
|                       |        | PERCENT | .05       | 2.17  | 6.54   | 13.78  | 77.48   | .06   | 100.00  |

TABLE 22 EGEK RIVER DAILY SOCKEYE SALMON  
ESCAPEMENT COUNTS, 1973

| DATE    | DAILY<br>COUNT | ACCUMULATIVE<br>COUNT | DAILY PERCENT<br>OF TOTAL | ACCUMULATIVE<br>PERCENT |
|---------|----------------|-----------------------|---------------------------|-------------------------|
| JUNE 27 | 0              | 0                     | 0.00                      | 0.00                    |
| 28      | 3,330          | 3,330                 | 1.01                      | 1.01                    |
| 29      | 6,252          | 9,582                 | 1.90                      | 2.91                    |
| 30      | 5,616          | 15,198                | 1.71                      | 4.62                    |
| JULY 1  | 15,990         | 31,188                | 4.86                      | 9.48                    |
| 2       | 8,646          | 39,834                | 2.63                      | 12.11                   |
| 3       | 10,944         | 50,778                | 3.33                      | 15.44                   |
| 4       | 9,360          | 60,138                | 2.85                      | 18.29                   |
| 5       | 15,528         | 75,666                | 4.72                      | 23.01                   |
| 6       | 588            | 76,254                | .18                       | 23.19                   |
| 7       | 264            | 76,518                | .08                       | 23.27                   |
| 8       | 36             | 76,554                | .01                       | 23.28                   |
| 9       | 39,924         | 116,478               | 12.14                     | 35.42                   |
| 10      | 28,098         | 144,576               | 8.54                      | 43.96                   |
| 11      | 26,622         | 171,198               | 8.10                      | 52.06                   |
| 12      | 48,996         | 220,194               | 14.90                     | 66.96                   |
| 13      | 28,506         | 248,700               | 8.67                      | 75.63                   |
| 14      | 39,750         | 288,450               | 12.09                     | 87.72                   |
| 15      | 9,552          | 298,002               | 2.90                      | 90.62                   |
| 16      | 9,366          | 307,368               | 2.85                      | 93.47                   |
| 17      | 8,790          | 316,158               | 2.67                      | 96.14                   |
| 18      | 2,082          | 318,240               | .63                       | 96.77                   |
| 19      | 378            | 318,618               | .12                       | 96.89                   |
| 20      | 240            | 318,858               | .07                       | 96.96                   |
| 21      | 4,152          | 323,010               | 1.26                      | 98.22                   |
| 22      | 1,212          | 324,222               | .37                       | 98.59                   |
| 23      | 822            | 325,044               | .25                       | 98.84                   |
| 24      | 1,266          | 326,310               | .39                       | 99.23                   |
| 25      | 2,514          | 328,824               | .76                       | 99.99                   |
| 26      | 24             | 328,848               | .01                       | 100.00                  |
| 27      | -6             | 328,842               | 0.00                      | 100.00                  |

TABLE 23 EGEK RIVER ESCAPEMENT OF SOCKEYE SALMON, SEX COMPOSITION BY SAMPLE PERIOD, 1973

| PERIOD<br>NUMBER | DATE        | NO. OF FISH<br>SAMPLED | COUNT |         | PERCENT |         | ESCAPEMENT | NUMBER IN ESCAPEMENT |         |
|------------------|-------------|------------------------|-------|---------|---------|---------|------------|----------------------|---------|
|                  |             |                        | MALES | FEMALES | MALES   | FEMALES |            | MALES                | FEMALES |
| 1                | 06/27-07/08 | 390                    | 198   | 192     | 50.77   | 49.23   | 76,554     | 38,866               | 37,688  |
| 2                | 07/09-07/27 | 525                    | 252   | 273     | 48.00   | 52.00   | 252,288    | 121,098              | 131,190 |
| TOTAL            |             | 915                    | 450   | 465     | 48.64   | 51.36   | 328,842    | 159,964              | 168,878 |

TABLE 24 EGEKIK RIVER ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SAMPLE PERIOD AND SEX,  
NUMBER AND PERCENT, 1973

| SAMPLE PERIOD  | DATE            |         | AGE GROUP |      |        |        |         |       | TOTAL |         |
|----------------|-----------------|---------|-----------|------|--------|--------|---------|-------|-------|---------|
|                |                 |         | 42        | 43   | 52     | 53     | 63      | 64    |       | 74      |
| MALES          |                 |         |           |      |        |        |         |       |       |         |
| 1              | 06/27-<br>07/08 | COUNT   | 982       | 785  | 2,356  | 4,907  | 28,855  | 196   | 785   | 38,866  |
|                |                 | PERCENT | 2.53      | 2.32 | 6.06   | 12.63  | 74.24   | .51   | 2.02  | 24.30   |
| 2              | 07/09-<br>07/27 | COUNT   | 2,883     | --   | 7,689  | 14,416 | 93,707  | 961   | 1,442 | 121,098 |
|                |                 | PERCENT | 2.38      | --   | 6.35   | 11.90  | 77.38   | .79   | 1.19  | 75.70   |
| COLUMN TOTALS  |                 | COUNT   | 3,865     | 785  | 10,045 | 13,323 | 122,562 | 1,157 | 2,227 | 159,964 |
|                |                 | PERCENT | 2.42      | .49  | 6.28   | 12.08  | 76.62   | .72   | 1.39  | 100.00  |
| FEMALES        |                 |         |           |      |        |        |         |       |       |         |
| 1              | 06/27-<br>07/08 | COUNT   | --        | --   | 1,374  | 4,122  | 31,799  | --    | 393   | 37,688  |
|                |                 | PERCENT | --        | --   | 3.65   | 10.94  | 84.37   | --    | 1.04  | 22.32   |
| 2              | 07/09-<br>07/27 | COUNT   | 481       | --   | 10,572 | 13,455 | 102,357 | --    | 4,325 | 131,190 |
|                |                 | PERCENT | .37       | --   | 8.06   | 10.26  | 78.02   | --    | 3.30  | 77.68   |
| COLUMN TOTALS  |                 | COUNT   | 481       | --   | 11,946 | 17,577 | 134,156 | --    | 4,718 | 168,878 |
|                |                 | PERCENT | .29       | --   | 7.07   | 10.41  | 79.44   | --    | 2.79  | 100.00  |
| SEXES COMBINED |                 |         |           |      |        |        |         |       |       |         |
| 1              | 06/27-<br>07/08 | COUNT   | 982       | 735  | 3,730  | 3,029  | 60,654  | 196   | 1,178 | 76,554  |
|                |                 | PERCENT | 1.28      | 1.03 | 4.87   | 11.79  | 79.23   | .26   | 1.54  | 23.28   |
| 2              | 07/09-<br>07/27 | COUNT   | 3,364     | --   | 18,261 | 27,871 | 196,064 | 961   | 5,767 | 252,288 |
|                |                 | PERCENT | 1.33      | --   | 7.24   | 11.05  | 77.71   | .38   | 2.29  | 76.72   |
| COLUMN TOTALS  |                 | COUNT   | 4,346     | 785  | 21,991 | 36,900 | 256,718 | 1,157 | 6,945 | 328,842 |
|                |                 | PERCENT | 1.32      | .24  | 6.69   | 11.22  | 78.07   | .35   | 2.11  | 100.00  |

## UGASHIK DISTRICT

With a forecasted return of only 188,000 sockeye salmon to this district a pre-season announcement was made that it was very unlikely that any fishing time would be allowed during the emergency order period. There were 135 units of gear registered for the district with only an increase of 3 units over that of the previous year.

As had been forecasted, the run fell far short of that required for even minimum escapement goals into this system. No fishing time was allowed in the district during the emergency order period and fishing was resumed on a 5-day-a-week basis by regulation on July 17. The total commercial catch of sockeye salmon was 4,000 with 88% of this harvest coming in the four days immediately following the end of the emergency order period. This catch represented less than 1% of the total Bay catch of 761,000 and was only 1% of the district's 20-year average season harvest. Age composition of the catch was 8% 4-year fish, 38% 5-year fish, and 54% 6-year fish.

The final escapement of 79,000 was only 16% of this system's escapement goal of 500,000.

The king salmon harvest of less than 200 is far below the long term average for this species while the coho harvest of 2,300 was slightly above the 20-year average. Chum salmon catches for the season also fell far below the long term average. The lower chum and king salmon catches can be attributed to the long closure and the lack of available effort in the district.

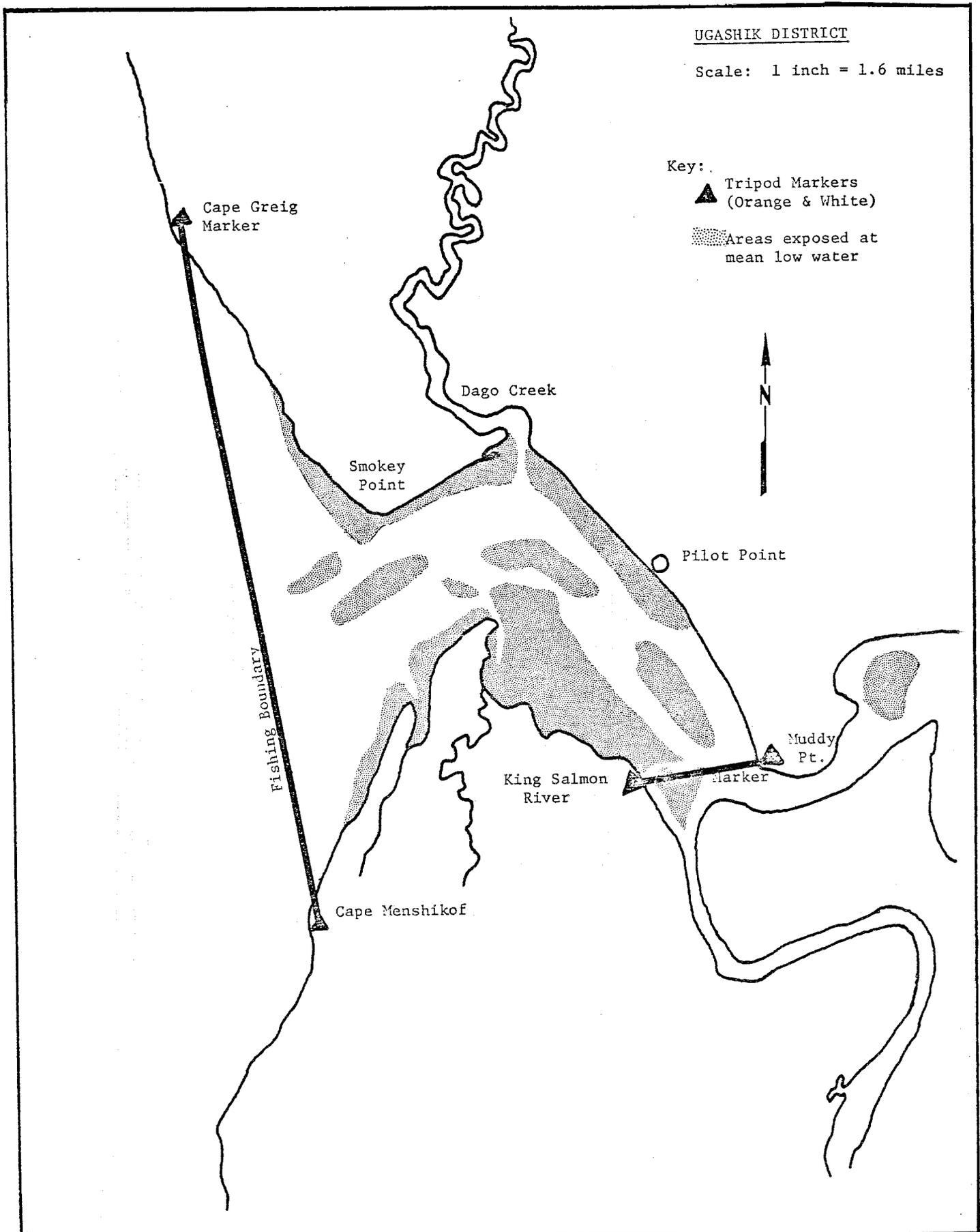


Figure 4. Ugashik District commercial fishing boundaries, 1973.

TABLE 25 UGASHIK RIVER CATCH AND ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SEX, NUMBER AND PERCENT, 1973

|                             | AGE GROUP |     |       |        |        |     | TOTAL  |
|-----------------------------|-----------|-----|-------|--------|--------|-----|--------|
|                             | 42        | 43  | 52    | 53     | 63     | 64  |        |
| <b>CATCH</b>                |           |     |       |        |        |     |        |
| <b>MALES</b>                |           |     |       |        |        |     |        |
| NUMBER                      | 210       | 9   | 172   | 601    | 877    | --  | 1,869  |
| PERCENT                     | 11.24     | .48 | 9.20  | 32.15  | 46.92  | --  | 47.68  |
| <b>FEMALES</b>              |           |     |       |        |        |     |        |
| NUMBER                      | 76        | --  | 267   | 458    | 1,240  | 10  | 2,051  |
| PERCENT                     | 3.70      | --  | 13.02 | 22.33  | 60.46  | .49 | 52.32  |
| <b>SEXES COMBINED</b>       |           |     |       |        |        |     |        |
| NUMBER                      | 286       | 9   | 439   | 1,059  | 2,117  | 10  | 3,920  |
| PERCENT                     | 7.30      | .23 | 11.20 | 27.02  | 54.00  | .25 | 100.00 |
| <b>ESCAPEMENT</b>           |           |     |       |        |        |     |        |
| <b>MALES</b>                |           |     |       |        |        |     |        |
| NUMBER                      | 2,087     | 95  | 1,708 | 5,976  | 8,727  | --  | 18,593 |
| PERCENT                     | 11.22     | .51 | 9.19  | 32.14  | 46.94  | --  | 47.69  |
| <b>FEMALES</b>              |           |     |       |        |        |     |        |
| NUMBER                      | 759       | --  | 2,656 | 4,553  | 12,332 | 95  | 20,395 |
| PERCENT                     | 3.72      | --  | 13.02 | 22.32  | 60.47  | .47 | 52.31  |
| <b>SEXES COMBINED</b>       |           |     |       |        |        |     |        |
| NUMBER                      | 2,846     | 95  | 4,364 | 10,529 | 21,059 | 95  | 38,988 |
| PERCENT                     | 7.30      | .24 | 11.19 | 27.01  | 54.02  | .24 | 100.00 |
| <b>CATCH AND ESCAPEMENT</b> |           |     |       |        |        |     |        |
| <b>MALES</b>                |           |     |       |        |        |     |        |
| NUMBER                      | 2,297     | 104 | 1,880 | 6,577  | 9,604  | --  | 20,462 |
| PERCENT                     | 11.22     | .51 | 9.19  | 32.14  | 46.94  | --  | 47.69  |
| <b>FEMALES</b>              |           |     |       |        |        |     |        |
| NUMBER                      | 835       | --  | 2,923 | 5,011  | 13,572 | 105 | 22,446 |
| PERCENT                     | 3.72      | --  | 13.02 | 22.32  | 60.47  | .47 | 52.31  |
| <b>SEXES COMBINED</b>       |           |     |       |        |        |     |        |
| NUMBER                      | 3,132     | 104 | 4,803 | 11,588 | 23,176 | 105 | 42,908 |
| PERCENT                     | 7.30      | .24 | 11.19 | 27.01  | 54.01  | .25 | 100.00 |

TABLE 26 UGASHIK RIVER DAILY SOCKEYE SALMON  
ESCAPEMENT COUNTS, 1973

| DATE   | DAILY<br>COUNT | ACCUMULATIVE<br>COUNT | DAILY PERCENT<br>OF TOTAL | ACCUMULATIVE<br>PERCENT |
|--------|----------------|-----------------------|---------------------------|-------------------------|
| JULY 4 | 0              | 0                     | 0.00                      | 0.00                    |
| 5      | 36             | 36                    | .09                       | .09                     |
| 6      | 6              | 42                    | .02                       | .11                     |
| 7      | 48             | 90                    | .12                       | .23                     |
| 8      | 24             | 114                   | .06                       | .29                     |
| 9      | 1,866 1        | 1,980                 | 4.79                      | 5.08                    |
| 10     | 3,810 1        | 5,790                 | 9.77                      | 14.85                   |
| 11     | 5,772          | 11,562                | 14.81                     | 29.66                   |
| 12     | 2,346          | 13,908                | 6.02                      | 35.68                   |
| 13     | 156            | 14,064                | .40                       | 36.08                   |
| 14     | 228            | 14,292                | .59                       | 36.67                   |
| 15     | 7,140          | 21,432                | 18.31                     | 54.98                   |
| 16     | 8,586          | 30,018                | 22.02                     | 77.00                   |
| 17     | 3,738          | 33,756                | 9.59                      | 86.59                   |
| 18     | 1,704          | 35,460                | 4.37                      | 90.96                   |
| 19     | 540            | 36,000                | 1.39                      | 92.35                   |
| 20     | 126            | 36,126                | .32                       | 92.67                   |
| 21     | 18             | 36,144                | .05                       | 92.72                   |
| 22     | 762            | 36,906                | 1.95                      | 94.67                   |
| 23     | 984            | 37,890                | 2.52                      | 97.19                   |
| 24     | 684            | 38,574                | 1.75                      | 98.94                   |
| 25     | 330            | 38,904                | .85                       | 99.79                   |
| 26     | 60             | 38,964                | .15                       | 99.94                   |
| 27     | 24             | 38,988                | .06                       | 100.00                  |

FOOTNOTES

1. ESTIMATED DAILY ESCAPEMENTS DUE TO ZERO WATER VISIBILITY.  
ESTIMATES TAKEN FROM LINE GRAPH BETWEEN PREVIOUS AND  
FOLLOWING DAYS.

TABLE 27 UGASHIK RIVER ESCAPEMENT OF SOCKEYE SALMON, SEX COMPOSITION BY SAMPLE PERIOD, 1973

| PERIOD<br>NUMBER | DATE        | NO. OF FISH<br>SAMPLED | COUNT |         | PERCENT |         | ESCAPEMENT | NUMBER IN ESCAPEMENT |         |
|------------------|-------------|------------------------|-------|---------|---------|---------|------------|----------------------|---------|
|                  |             |                        | MALES | FEMALES | MALES   | FEMALES |            | MALES                | FEMALES |
| 1                | 07/04-07/27 | 411                    | 196   | 215     | 47.69   | 52.31   | 38,988     | 18,593               | 20,395  |

## NUSHAGAK DISTRICT

Although the forecast indicated the sockeye salmon return to this district would be only slightly in excess of escapement requirements, gear registration was up considerably from the previous year. The 1,592 units of gear (1,204 of drift gear and 388 of set) amounted to over a 200% increase in registration over that of the previous year. A major factor in this increase was again due to a new regulation limiting each drift fisherman to 25 fathoms of net and each set fisherman to 12.5 fathoms during the emergency order period (June 16 to July 17). Pooling of gear was allowed by licensed gear holders during this period up to a maximum of 150 fathoms of net per boat or 50 fathoms for a set net. This resulted in an average of 75 fathoms of gear per vessel and 25 fathoms of gear per set net.

Only three 12-hour periods (2 for Nushagak section and 1 for Igushik section) were allowed during the time that the sockeye salmon is the predominant species in the district. The period on June 27 produced a sockeye catch of 60,000 and brought the cumulative district catch to 63,000.

Taking into account the 370,000 forecast for the Igushik system and a good showing of escapement into the river past the fishery by June 27, a 12-hour Igushik section only period was announced for June 29. The catch from this period included only 14,000 sockeye salmon and fell far below the long term average catch by that date for the forecasted size of the run.

Excellent test boat catches on July 1 indicated a large body of fish in the upper district and a 12-hour period was announced for July 3. This period produced a catch of 127,000 bringing the cumulative catch to 209,000.

The run failed to build to forecasted levels and on July 8 an announcement was made that the possibility of additional fishing time before the end of the emergency order period was remote. By the middle of July a strong chum run was evident so the district was opened to fishing on July 16 which is one day in advance of the usual end of the emergency order period and was continued on a 5-day-a-week basis thereafter. The total sockeye catch for the district this season was 272,000. Age composition of the catch was 16% 4-year fish, 74% 5-year fish, and 10% 6-year fish.

Escapement within the desired range were achieved in only the Nuyakuk and Nushagak system. The total district escapement of 581,000 was only 55% of the goal. The Nushagak district has significant runs of other species during most years. Preseason harvest levels for these species are forecasted for the district each year. The king salmon harvest of 30,500 fell far below the forecast while the coho and chum salmon catches were both above forecasted levels. The 1973 king salmon harvest was only 45% of the district's 20-year average catch while chum salmon catches were 132% of the 20-year average. Coho salmon catches were very close to historical levels. Pink salmon catches are insignificant during odd-numbered years.

The Nushagak district sockeye catch was apportioned in a multi-step process. Igushik section fish were treated with Igushik beach sampling age composition data and deducted from the drift catch. The remainder were apportioned to the rivers in the Nushagak section based on the age and sex composition of the remaining catch sampling in comparison with the age and sex composition of the escapement sampling on the various river systems tributary to the Nushagak section.

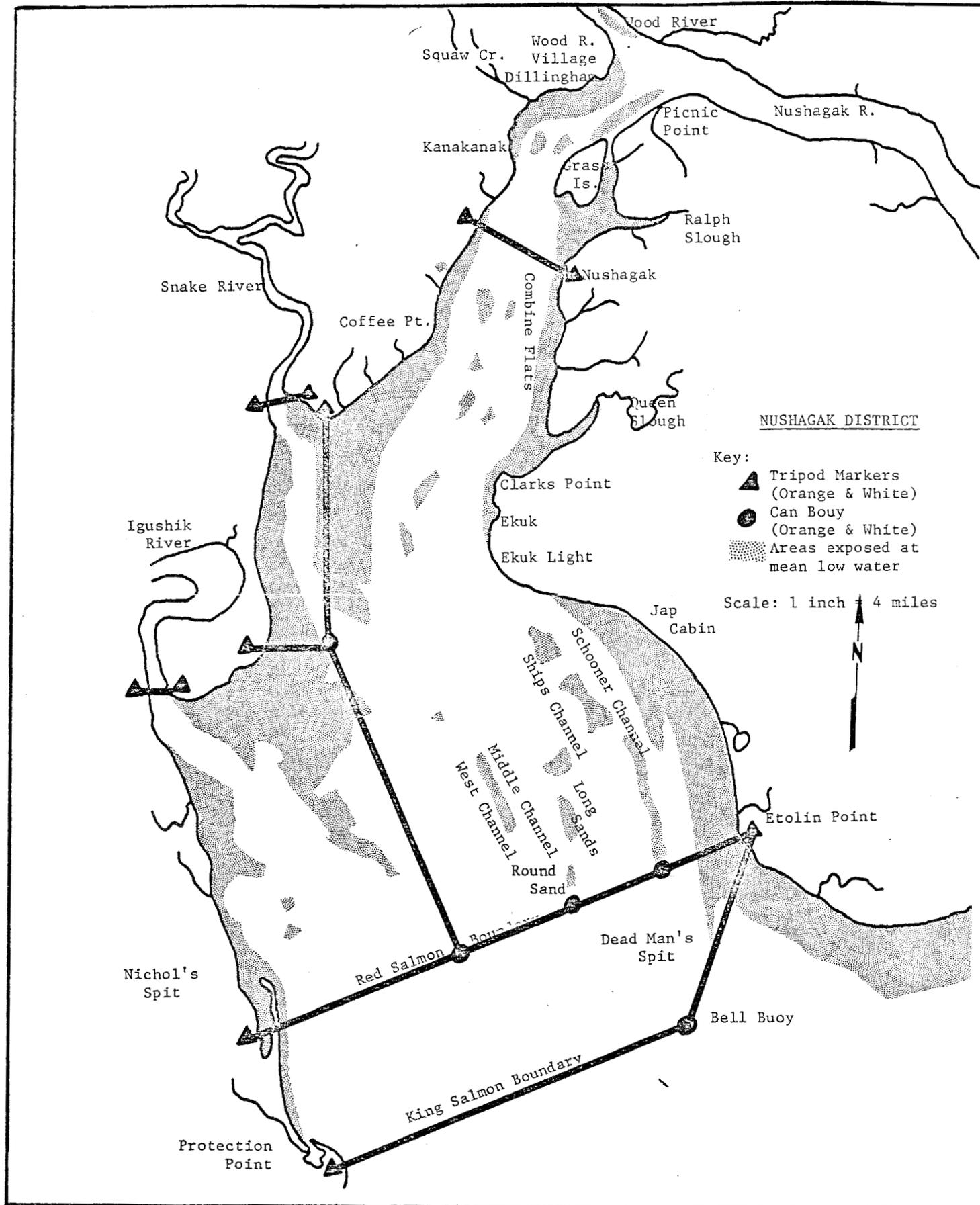


Figure 5. Nushagak-Igushik District commercial fishing boundaries, 1973.

TABLE 28 NUSHAGAK-IGUSHIK DISTRICT INSHORE RUN OF SOCKEYE SALMON, AGE GROUP BY SEX, NUMBER AND TOTAL PERCENT, 1973

|                | 31  | 32    | 41     | 42     | 51    | 52      | AGE GROUP<br>53 | 62    | 63     | 73  | 74  | TOTAL   |
|----------------|-----|-------|--------|--------|-------|---------|-----------------|-------|--------|-----|-----|---------|
| MALES          |     |       |        |        |       |         |                 |       |        |     |     |         |
| ESCAPEMENT     | --  | 2,214 | 14,110 | 21,037 | 925   | 190,526 | 2,072           | 1,475 | 20,566 | --  | --  | 252,925 |
| CATCH          | --  | --    | 11,382 | 6,433  | 783   | 94,506  | 391             | 782   | 15,094 | 136 | 22  | 129,531 |
| TOTAL          | --  | 2,214 | 25,492 | 27,470 | 1,708 | 285,032 | 2,463           | 2,257 | 35,660 | 138 | 22  | 382,456 |
| PERCENT        | .00 | .58   | 6.66   | 7.18   | .45   | 74.53   | .64             | .59   | 9.32   | .04 | .01 | 100.00  |
| FEMALES        |     |       |        |        |       |         |                 |       |        |     |     |         |
| ESCAPEMENT     | 457 | --    | 35,020 | 17,332 | 2,285 | 247,059 | 2,435           | 2,391 | 21,403 | --  | --  | 328,382 |
| CATCH          | --  | --    | 20,032 | 3,036  | 1,725 | 104,464 | --              | 43    | 12,182 | 391 | 689 | 142,562 |
| TOTAL          | 457 | --    | 55,052 | 20,368 | 4,010 | 351,523 | 2,435           | 2,434 | 33,585 | 391 | 689 | 470,944 |
| PERCENT        | .10 | .00   | 11.69  | 4.32   | .85   | 74.64   | .52             | .52   | 7.13   | .08 | .15 | 100.00  |
| SEXES COMBINED |     |       |        |        |       |         |                 |       |        |     |     |         |
| ESCAPEMENT     | 457 | 2,214 | 49,130 | 38,369 | 3,210 | 437,585 | 4,507           | 3,866 | 41,969 | --  | --  | 561,307 |
| CATCH          | --  | --    | 31,414 | 9,469  | 2,508 | 198,970 | 391             | 825   | 27,276 | 529 | 711 | 272,093 |
| TOTAL          | 457 | 2,214 | 80,544 | 47,838 | 5,718 | 636,555 | 4,898           | 4,691 | 69,245 | 529 | 711 | 653,400 |
| PERCENT        | .05 | .26   | 9.44   | 5.61   | .67   | 74.59   | .57             | .55   | 8.12   | .06 | .08 | 100.00  |

TABLE 29 IGUSHIK RIVER APPORTIONED CATCH AND ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SEX, NUMBER AND PERCENT, 1973

|                      | 31  | 32  | 41  | 42   | 51  | AGE GROUP<br>52 | 53  | 62  | 63     | 73  | 74   | TOTAL  |
|----------------------|-----|-----|-----|------|-----|-----------------|-----|-----|--------|-----|------|--------|
| CATCH                |     |     |     |      |     |                 |     |     |        |     |      |        |
| MALES                |     |     |     |      |     |                 |     |     |        |     |      |        |
| NUMBER               | --  | --  | 122 | 305  | --  | 13,538          | --  | 116 | 2,924  | 14  | 22   | 17,041 |
| PERCENT              | .00 | .00 | .72 | 1.79 | .00 | 79.44           | .00 | .68 | 17.16  | .08 | .13  | 46.11  |
| FEMALES              |     |     |     |      |     |                 |     |     |        |     |      |        |
| NUMBER               | --  | --  | 60  | 61   | 62  | 16,486          | --  | 43  | 2,470  | 45  | 689  | 19,916 |
| PERCENT              | .00 | .00 | .30 | .31  | .31 | 82.78           | .00 | .21 | 12.40  | .23 | 3.46 | 53.89  |
| SEXES COMBINED       |     |     |     |      |     |                 |     |     |        |     |      |        |
| NUMBER               | --  | --  | 182 | 366  | 62  | 30,024          | --  | 159 | 5,394  | 59  | 711  | 36,957 |
| PERCENT              | .00 | .00 | .49 | .99  | .17 | 81.24           | .00 | .43 | 14.60  | .16 | 1.92 | 100.00 |
| ESCAPEMENT           |     |     |     |      |     |                 |     |     |        |     |      |        |
| MALES                |     |     |     |      |     |                 |     |     |        |     |      |        |
| NUMBER               | --  | --  | --  | --   | --  | 24,210          | 102 | --  | 2,136  | --  | --   | 26,448 |
| PERCENT              | .00 | .00 | .00 | .00  | .00 | 91.54           | .38 | .00 | 8.00   | .00 | .00  | 44.44  |
| FEMALES              |     |     |     |      |     |                 |     |     |        |     |      |        |
| NUMBER               | --  | --  | --  | 305  | --  | 29,703          | 204 | --  | 2,648  | --  | --   | 33,060 |
| PERCENT              | .00 | .00 | .00 | .92  | .00 | 89.85           | .62 | .00 | 8.61   | .00 | .00  | 55.56  |
| SEXES COMBINED       |     |     |     |      |     |                 |     |     |        |     |      |        |
| NUMBER               | --  | --  | --  | 305  | --  | 53,913          | 306 | --  | 4,984  | --  | --   | 59,508 |
| PERCENT              | .00 | .00 | .00 | .51  | .00 | 90.60           | .51 | .00 | 8.38   | .00 | .00  | 100.00 |
| CATCH AND ESCAPEMENT |     |     |     |      |     |                 |     |     |        |     |      |        |
| MALES                |     |     |     |      |     |                 |     |     |        |     |      |        |
| NUMBER               | --  | --  | 122 | 305  | --  | 37,748          | 102 | 116 | 5,060  | 14  | 22   | 43,488 |
| PERCENT              | .00 | .00 | .28 | .70  | .00 | 86.80           | .23 | .27 | 11.64  | .03 | .05  | 45.00  |
| FEMALES              |     |     |     |      |     |                 |     |     |        |     |      |        |
| NUMBER               | --  | --  | 60  | 366  | 62  | 46,189          | 204 | 43  | 5,318  | 45  | 689  | 52,978 |
| PERCENT              | .00 | .00 | .11 | .69  | .12 | 87.19           | .39 | .08 | 10.64  | .08 | 1.30 | 54.92  |
| SEXES COMBINED       |     |     |     |      |     |                 |     |     |        |     |      |        |
| NUMBER               | --  | --  | 182 | 671  | 62  | 83,937          | 306 | 159 | 10,378 | 59  | 711  | 96,485 |
| PERCENT              | .00 | .00 | .19 | .70  | .06 | 87.01           | .32 | .16 | 10.76  | .06 | .74  | 100.00 |

TABLE 30 WOOD RIVER APPORTIONED CATCH AND ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SEX, NUMBER AND PERCENT, 1973

|                      | 31  | 32    | 41    | 42     | 51  | AGE GROUP<br>52 | 53    | 62    | 63     | 73  | 74  | TOTAL   |
|----------------------|-----|-------|-------|--------|-----|-----------------|-------|-------|--------|-----|-----|---------|
| CATCH                |     |       |       |        |     |                 |       |       |        |     |     |         |
| MALES                |     |       |       |        |     |                 |       |       |        |     |     |         |
| NUMBER               | --  | --    | 399   | 5,467  | --  | 39,888          | 385   | 137   | 9,102  | 85  | --  | 55,463  |
| PERCENT              | .00 | .00   | .72   | 9.86   | .00 | 71.92           | .69   | .25   | 16.41  | .15 | .00 | 48.97   |
| FEMALES              |     |       |       |        |     |                 |       |       |        |     |     |         |
| NUMBER               | --  | --    | 175   | 2,808  | --  | 45,374          | --    | --    | 9,271  | 163 | --  | 57,791  |
| PERCENT              | .00 | .00   | .30   | 4.86   | .00 | 78.52           | .00   | .00   | 16.64  | .28 | .00 | 51.03   |
| SEXES COMBINED       |     |       |       |        |     |                 |       |       |        |     |     |         |
| NUMBER               | --  | --    | 574   | 8,275  | --  | 85,262          | 385   | 137   | 18,373 | 248 | --  | 113,254 |
| PERCENT              | .00 | .00   | .51   | 7.31   | .00 | 75.28           | .34   | .12   | 16.22  | .22 | .00 | 100.00  |
| ESCAPEMENT           |     |       |       |        |     |                 |       |       |        |     |     |         |
| MALES                |     |       |       |        |     |                 |       |       |        |     |     |         |
| NUMBER               | --  | 2,214 | 1,107 | 19,374 | --  | 114,587         | 1,661 | 554   | 16,053 | --  | --  | 155,550 |
| PERCENT              | .00 | 1.42  | .71   | 12.45  | .00 | 73.67           | 1.07  | .36   | 10.32  | .00 | .00 | 47.07   |
| FEMALES              |     |       |       |        |     |                 |       |       |        |     |     |         |
| NUMBER               | --  | --    | 553   | 15,500 | --  | 138,943         | 2,214 | 554   | 17,160 | --  | --  | 174,924 |
| PERCENT              | .00 | .00   | .32   | 8.86   | .00 | 79.43           | 1.26  | .32   | 9.81   | .00 | .00 | 52.93   |
| SEXES COMBINED       |     |       |       |        |     |                 |       |       |        |     |     |         |
| NUMBER               | --  | 2,214 | 1,660 | 34,874 | --  | 253,530         | 3,875 | 1,108 | 33,213 | --  | --  | 330,474 |
| PERCENT              | .00 | .67   | .50   | 10.55  | .00 | 76.72           | 1.17  | .34   | 10.05  | .00 | .00 | 100.00  |
| CATCH AND ESCAPEMENT |     |       |       |        |     |                 |       |       |        |     |     |         |
| MALES                |     |       |       |        |     |                 |       |       |        |     |     |         |
| NUMBER               | --  | 2,214 | 1,506 | 24,841 | --  | 154,475         | 2,046 | 691   | 25,155 | 85  | --  | 211,013 |
| PERCENT              | .00 | 1.05  | .71   | 11.77  | .00 | 73.21           | .97   | .33   | 11.92  | .04 | .00 | 47.55   |
| FEMALES              |     |       |       |        |     |                 |       |       |        |     |     |         |
| NUMBER               | --  | --    | 728   | 18,306 | --  | 184,317         | 2,214 | 554   | 26,431 | 163 | --  | 232,715 |
| PERCENT              | .00 | .00   | .31   | 7.87   | .00 | 79.20           | .95   | .24   | 11.36  | .07 | .00 | 52.45   |
| SEXES COMBINED       |     |       |       |        |     |                 |       |       |        |     |     |         |
| NUMBER               | --  | 2,214 | 2,234 | 43,149 | --  | 333,792         | 4,260 | 1,245 | 51,586 | 248 | --  | 443,728 |
| PERCENT              | .00 | .50   | .50   | 9.72   | .00 | 76.35           | .96   | .28   | 11.63  | .06 | .00 | 100.00  |

TABLE 31 NUYAKUK RIVER APPORTIONED CATCH AND ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SEX, NUMBER AND PERCENT, 1973

|                      | 31  | 32  | 41     | 42    | 51  | AGE GROUP<br>52 | 53  | 62  | 63    | 73  | 74  | TOTAL   |
|----------------------|-----|-----|--------|-------|-----|-----------------|-----|-----|-------|-----|-----|---------|
| CATCH                |     |     |        |       |     |                 |     |     |       |     |     |         |
| MALES                |     |     |        |       |     |                 |     |     |       |     |     |         |
| NUMBER               | --  | --  | 3,022  | 577   | 100 | 27,911          | --  | --  | 1,598 | 23  | --  | 33,231  |
| PERCENT              | .00 | .00 | 9.09   | 1.74  | .30 | 83.99           | .00 | .00 | 4.81  | .07 | .00 | 50.20   |
| FEMALES              |     |     |        |       |     |                 |     |     |       |     |     |         |
| NUMBER               | --  | --  | 2,097  | 141   | --  | 30,207          | --  | --  | 419   | 98  | --  | 32,982  |
| PERCENT              | .00 | .00 | 6.36   | .43   | .00 | 91.64           | .00 | .00 | 1.27  | .30 | .00 | 49.80   |
| SEXES COMBINED       |     |     |        |       |     |                 |     |     |       |     |     |         |
| NUMBER               | --  | --  | 5,119  | 718   | 100 | 58,118          | --  | --  | 2,017 | 121 | --  | 66,193  |
| PERCENT              | .00 | .00 | 7.73   | 1.09  | .15 | 87.80           | .00 | .00 | 3.05  | .18 | .00 | 100.00  |
| ESCAPEMENT           |     |     |        |       |     |                 |     |     |       |     |     |         |
| MALES                |     |     |        |       |     |                 |     |     |       |     |     |         |
| NUMBER               | --  | --  | 3,821  | 1,373 | 130 | 35,896          | 278 | --  | 1,263 | --  | --  | 42,761  |
| PERCENT              | .00 | .00 | 8.94   | 3.21  | .30 | 83.95           | .65 | .00 | 2.95  | .00 | .00 | 38.87   |
| FEMALES              |     |     |        |       |     |                 |     |     |       |     |     |         |
| NUMBER               | --  | --  | 5,751  | 1,373 | --  | 58,500          | --  | 278 | 1,353 | --  | --  | 67,255  |
| PERCENT              | .00 | .00 | 8.55   | 2.04  | .00 | 86.98           | .00 | .42 | 2.01  | .00 | .00 | 61.13   |
| SEXES COMBINED       |     |     |        |       |     |                 |     |     |       |     |     |         |
| NUMBER               | --  | --  | 9,572  | 2,746 | 130 | 94,396          | 278 | 278 | 2,616 | --  | --  | 110,016 |
| PERCENT              | .00 | .00 | 8.70   | 2.50  | .12 | 85.80           | .25 | .25 | 2.33  | .00 | .00 | 100.00  |
| CATCH AND ESCAPEMENT |     |     |        |       |     |                 |     |     |       |     |     |         |
| MALES                |     |     |        |       |     |                 |     |     |       |     |     |         |
| NUMBER               | --  | --  | 6,843  | 1,950 | 230 | 63,807          | 278 | --  | 2,861 | 23  | --  | 75,992  |
| PERCENT              | .00 | .00 | 9.00   | 2.57  | .30 | 83.97           | .37 | .00 | 3.76  | .03 | .00 | 43.13   |
| FEMALES              |     |     |        |       |     |                 |     |     |       |     |     |         |
| NUMBER               | --  | --  | 7,848  | 1,514 | --  | 86,707          | --  | 278 | 1,772 | 98  | --  | 100,217 |
| PERCENT              | .00 | .00 | 7.83   | 1.51  | .00 | 88.51           | .00 | .28 | 1.77  | .10 | .00 | 56.87   |
| SEXES COMBINED       |     |     |        |       |     |                 |     |     |       |     |     |         |
| NUMBER               | --  | --  | 14,691 | 3,464 | 230 | 152,514         | 278 | 278 | 4,633 | 121 | --  | 176,209 |
| PERCENT              | .00 | .00 | 8.34   | 1.96  | .13 | 86.55           | .16 | .16 | 2.63  | .07 | .00 | 100.00  |

TABLE 32 NUSHAGAK-MULCHATNA RIVER APPORTIONED CATCH AND ESTIMATED ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SEX, NUMBER AND PERCENT, 1973

|                      | 31  | 32  | 41     | 42  | 51    | AGE GROUP |     |       |       |     |     | TOTAL   |
|----------------------|-----|-----|--------|-----|-------|-----------|-----|-------|-------|-----|-----|---------|
|                      |     |     |        |     |       | 52        | 53  | 62    | 63    | 73  | 74  |         |
| CATCH                |     |     |        |     |       |           |     |       |       |     |     |         |
| MALES                |     |     |        |     |       |           |     |       |       |     |     |         |
| NUMBER               | --  | --  | 7,835  | --  | 883   | 13,107    | --  | 529   | 1,443 | 16  | --  | 23,613  |
| PERCENT              | .00 | .00 | 33.18  | .00 | 2.89  | 55.51     | .00 | 2.24  | 6.11  | .07 | .00 | 42.63   |
| FEMALES              |     |     |        |     |       |           |     |       |       |     |     |         |
| NUMBER               | --  | --  | 17,700 | --  | 1,663 | 12,335    | --  | --    | --    | 85  | --  | 31,783  |
| PERCENT              | .00 | .00 | 55.69  | .00 | 5.23  | 38.81     | .00 | .00   | .00   | .27 | .00 | 57.37   |
| SEXES COMBINED       |     |     |        |     |       |           |     |       |       |     |     |         |
| NUMBER               | --  | --  | 25,535 | --  | 2,346 | 25,442    | --  | 529   | 1,443 | 101 | --  | 55,396  |
| PERCENT              | .00 | .00 | 46.10  | .00 | 4.24  | 45.93     | .00 | .95   | 2.60  | .18 | .00 | 100.00  |
| ESCAPEMENT           |     |     |        |     |       |           |     |       |       |     |     |         |
| MALES                |     |     |        |     |       |           |     |       |       |     |     |         |
| NUMBER               | --  | --  | 9,175  | --  | 795   | 15,676    | --  | 921   | 1,072 | --  | --  | 27,639  |
| PERCENT              | .00 | .00 | 33.19  | .00 | 2.88  | 56.72     | .00 | 3.33  | 3.88  | .00 | .00 | 34.36   |
| FEMALES              |     |     |        |     |       |           |     |       |       |     |     |         |
| NUMBER               | 457 | --  | 28,716 | --  | 2,285 | 19,738    | --  | 1,559 | --    | --  | --  | 52,755  |
| PERCENT              | .87 | .00 | 54.43  | .00 | 4.33  | 37.41     | .00 | 2.96  | .00   | .00 | .00 | 65.62   |
| SEXES COMBINED       |     |     |        |     |       |           |     |       |       |     |     |         |
| NUMBER               | 457 | --  | 37,891 | --  | 3,080 | 35,414    | --  | 2,480 | 1,072 | --  | --  | 80,394  |
| PERCENT              | .57 | .00 | 47.13  | .00 | 3.83  | 44.05     | .00 | 3.09  | 1.33  | .00 | .00 | 100.00  |
| CATCH AND ESCAPEMENT |     |     |        |     |       |           |     |       |       |     |     |         |
| MALES                |     |     |        |     |       |           |     |       |       |     |     |         |
| NUMBER               | --  | --  | 17,010 | --  | 1,478 | 28,783    | --  | 1,450 | 2,515 | 16  | --  | 51,252  |
| PERCENT              | .00 | .00 | 33.19  | .00 | 2.88  | 56.16     | .00 | 2.83  | 4.91  | .03 | .00 | 37.74   |
| FEMALES              |     |     |        |     |       |           |     |       |       |     |     |         |
| NUMBER               | 457 | --  | 46,416 | --  | 3,946 | 32,073    | --  | 1,559 | --    | 85  | --  | 84,538  |
| PERCENT              | .54 | .00 | 54.91  | .00 | 4.67  | 37.94     | .00 | 1.84  | .00   | .10 | .00 | 62.26   |
| SEXES COMBINED       |     |     |        |     |       |           |     |       |       |     |     |         |
| NUMBER               | 457 | --  | 63,426 | --  | 5,426 | 60,856    | --  | 3,009 | 2,515 | 101 | --  | 135,790 |
| PERCENT              | .34 | .00 | 46.71  | .00 | 3.99  | 44.82     | .00 | 2.22  | 1.85  | .07 | .00 | 100.00  |

NOTE: THE ESCAPEMENT COUNTS IN THIS TABLE, ARE BASED UPON ESTIMATED ESCAPEMENTS TO THE NUSHAGAK-MULCHATNA RIVER SYSTEM. THESE ESTIMATES ARE TAKEN FROM TABLE A-2.

TABLE 33 SNAKE RIVER APPORTIONED CATCH AND ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SEX, NUMBER AND PERCENT, 1973

|                      | 31  | 32  | 41   | 42    | 51  | AGE GROUP<br>52 | 53   | 62  | 63    | 73  | 74  | TOTAL  |
|----------------------|-----|-----|------|-------|-----|-----------------|------|-----|-------|-----|-----|--------|
| CATCH                |     |     |      |       |     |                 |      |     |       |     |     |        |
| MALES                |     |     |      |       |     |                 |      |     |       |     |     |        |
| NUMBER               | --  | --  | 4    | 84    | --  | 62              | 6    | --  | 27    | --  | --  | 183    |
| PERCENT              | .00 | .00 | 2.19 | 45.90 | .00 | 33.88           | 3.28 | .00 | 14.75 | .00 | .00 | 62.46  |
| FEMALES              |     |     |      |       |     |                 |      |     |       |     |     |        |
| NUMBER               | --  | --  | --   | 26    | --  | 62              | --   | --  | 22    | --  | --  | 110    |
| PERCENT              | .00 | .00 | .00  | 23.64 | .00 | 56.36           | .00  | .00 | 20.00 | .00 | .00 | 37.54  |
| SEXES COMBINED       |     |     |      |       |     |                 |      |     |       |     |     |        |
| NUMBER               | --  | --  | 4    | 110   | --  | 124             | 6    | --  | 49    | --  | --  | 293    |
| PERCENT              | .00 | .00 | 1.37 | 37.54 | .00 | 42.32           | 2.05 | .00 | 16.72 | .00 | .00 | 100.00 |
| ESCAPEMENT           |     |     |      |       |     |                 |      |     |       |     |     |        |
| MALES                |     |     |      |       |     |                 |      |     |       |     |     |        |
| NUMBER               | --  | --  | 7    | 290   | --  | 157             | 31   | --  | 42    | --  | --  | 527    |
| PERCENT              | .00 | .00 | 1.33 | 55.03 | .00 | 29.79           | 5.88 | .00 | 7.97  | .00 | .00 | 57.60  |
| FEMALES              |     |     |      |       |     |                 |      |     |       |     |     |        |
| NUMBER               | --  | --  | --   | 154   | --  | 175             | 17   | --  | 42    | --  | --  | 388    |
| PERCENT              | .00 | .00 | .00  | 39.69 | .00 | 45.10           | 4.38 | .00 | 10.83 | .00 | .00 | 42.40  |
| SEXES COMBINED       |     |     |      |       |     |                 |      |     |       |     |     |        |
| NUMBER               | --  | --  | 7    | 444   | --  | 332             | 48   | --  | 84    | --  | --  | 915    |
| PERCENT              | .00 | .00 | .77  | 48.52 | .00 | 36.28           | 5.25 | .00 | 9.18  | .00 | .00 | 100.00 |
| CATCH AND ESCAPEMENT |     |     |      |       |     |                 |      |     |       |     |     |        |
| MALES                |     |     |      |       |     |                 |      |     |       |     |     |        |
| NUMBER               | --  | --  | 11   | 374   | --  | 219             | 37   | --  | 69    | --  | --  | 710    |
| PERCENT              | .00 | .00 | 1.55 | 52.68 | .00 | 30.84           | 5.21 | .00 | 9.72  | .00 | .00 | 58.77  |
| FEMALES              |     |     |      |       |     |                 |      |     |       |     |     |        |
| NUMBER               | --  | --  | --   | 180   | --  | 237             | 17   | --  | 64    | --  | --  | 498    |
| PERCENT              | .00 | .00 | .00  | 36.15 | .00 | 47.59           | 3.41 | .00 | 12.85 | .00 | .00 | 41.23  |
| SEXES COMBINED       |     |     |      |       |     |                 |      |     |       |     |     |        |
| NUMBER               | --  | --  | 11   | 554   | --  | 456             | 54   | --  | 133   | --  | --  | 1,208  |
| PERCENT              | .00 | .00 | .91  | 45.86 | .00 | 37.75           | 4.47 | .00 | 11.01 | .00 | .00 | 100.00 |

TABLE 34 NUSHAGAK-IGUSHIK DISTRICT COMMERCIAL CATCH OF SOCKEYE SALMON, SEX COMPOSITION BY SAMPLE PERIOD, 1973

| PERIOD<br>NUMBER | DATE        | NO. OF FISH<br>SAMPLED | COUNT |         | PERCENT |         | CATCH   | NUMBER IN CATCH |         |
|------------------|-------------|------------------------|-------|---------|---------|---------|---------|-----------------|---------|
|                  |             |                        | MALES | FEMALES | MALES   | FEMALES |         | MALES           | FEMALES |
| 1                | 01/01-06/28 | 402                    | 188   | 214     | 46.77   | 53.23   | 55,389  | 25,903          | 29,486  |
| 2                | 06/29-12/31 | 522                    | 250   | 272     | 47.89   | 52.11   | 204,190 | 97,792          | 106,398 |
| <b>TOTAL</b>     |             | 924                    | 438   | 486     | 47.65   | 52.35   | 259,579 | 123,695         | 135,884 |

TABLE 35 NUSHAGAK-IGUSHIK DISTRICT COMMERCIAL CATCH OF SOCKEYE SALMON, AGE GROUP BY SAMPLE PERIOD AND SEX, NUMBER AND PERCENT, 1973

| SAMPLE PERIOD         | DATE   |         | AGE GROUP |       |       |         |     |     |        |     | TOTAL |         |
|-----------------------|--------|---------|-----------|-------|-------|---------|-----|-----|--------|-----|-------|---------|
|                       |        |         | 41        | 42    | 51    | 52      | 53  | 62  | 63     | 73  |       | 74      |
| <b>MALES</b>          |        |         |           |       |       |         |     |     |        |     |       |         |
| 1                     | 01/01- | COUNT   | 2,342     | 1,240 | --    | 19,427  | --  | --  | 2,756  | 138 | --    | 25,903  |
|                       | 06/28  | PERCENT | 9.04      | 4.79  | --    | 75.00   | --  | --  | 10.64  | .53 | --    | 20.94   |
| 2                     | 06/29- | COUNT   | 8,997     | 5,085 | 783   | 70,410  | 391 | 782 | 11,344 | --  | --    | 97,792  |
|                       | 12/31  | PERCENT | 9.20      | 5.20  | .80   | 72.00   | .40 | .80 | 11.60  | --  | --    | 79.06   |
| COLUMN TOTALS         |        | COUNT   | 11,339    | 6,325 | 783   | 89,837  | 391 | 782 | 14,100 | 138 | --    | 123,695 |
|                       |        | PERCENT | 9.17      | 5.11  | .63   | 72.63   | .32 | .63 | 11.40  | .11 | --    | 100.00  |
| <b>FEMALES</b>        |        |         |           |       |       |         |     |     |        |     |       |         |
| 1                     | 01/01- | COUNT   | 3,582     | 276   | 138   | 22,872  | --  | --  | 2,342  | --  | 276   | 29,486  |
|                       | 06/28  | PERCENT | 12.15     | .93   | .47   | 77.57   | --  | --  | 7.94   | --  | .93   | 21.70   |
| 2                     | 06/29- | COUNT   | 16,429    | 2,738 | 1,565 | 75,887  | --  | --  | 8,997  | 391 | 391   | 106,398 |
|                       | 12/31  | PERCENT | 15.44     | 2.57  | 1.47  | 71.32   | --  | --  | 8.46   | .37 | .37   | 78.30   |
| COLUMN TOTALS         |        | COUNT   | 20,011    | 3,014 | 1,703 | 98,759  | --  | --  | 11,339 | 391 | 667   | 135,884 |
|                       |        | PERCENT | 14.73     | 2.22  | 1.25  | 72.68   | --  | --  | 8.34   | .29 | .49   | 100.00  |
| <b>SEXES COMBINED</b> |        |         |           |       |       |         |     |     |        |     |       |         |
| 1                     | 01/01- | COUNT   | 5,924     | 1,516 | 138   | 42,299  | --  | --  | 5,098  | 138 | 276   | 55,389  |
|                       | 06/28  | PERCENT | 10.69     | 2.74  | .25   | 76.37   | --  | --  | 9.20   | .25 | .50   | 21.34   |
| 2                     | 06/29- | COUNT   | 25,426    | 7,823 | 2,348 | 146,297 | 391 | 782 | 20,341 | 391 | 391   | 204,190 |
|                       | 12/31  | PERCENT | 12.45     | 3.83  | 1.15  | 71.65   | .19 | .39 | 9.96   | .19 | .19   | 78.66   |
| COLUMN TOTALS         |        | COUNT   | 31,350    | 9,339 | 2,486 | 188,596 | 391 | 782 | 25,439 | 529 | 667   | 259,579 |
|                       |        | PERCENT | 12.08     | 3.60  | .96   | 72.65   | .15 | .30 | 9.80   | .20 | .26   | 100.00  |

TABLE 36 IGUSHIK BEACH SUB-DISTRICT COMMERCIAL CATCH OF SOCKEYE SALMON, SEX COMPOSITION BY SAMPLE PERIOD, 1973

| PERIOD NUMBER | DATE        | NO. OF FISH SAMPLED | COUNT |         | PERCENT |         | CATCH  | NUMBER IN CATCH |         |
|---------------|-------------|---------------------|-------|---------|---------|---------|--------|-----------------|---------|
|               |             |                     | MALES | FEMALES | MALES   | FEMALES |        | MALES           | FEMALES |
| 1             | 01/01-12/31 | 579                 | 270   | 309     | 46.63   | 53.37   | 12,514 | 5,836           | 6,678   |

TABLE 37 IGJSHIK BEACH SUB-DISTRICT COMMERCIAL CATCH OF SOCKEYE SALMON, AGE GROUP BY SAMPLE PERIOD AND SEX, NUMBER AND PERCENT, 1973

| SAMPLE PERIOD  | DATE   |         | AGE GROUP |      |     |        |     |       |     | TOTAL  |
|----------------|--------|---------|-----------|------|-----|--------|-----|-------|-----|--------|
|                |        |         | 41        | 42   | 51  | 52     | 62  | 63    | 74  |        |
| MALES          |        |         |           |      |     |        |     |       |     |        |
| 1              | 01/01- | COUNT   | 43        | 108  | --  | 4,669  | --  | 994   | 22  | 5,836  |
|                | 12/31  | PERCENT | .74       | 1.85 | --  | 80.00  | --  | 17.04 | .37 | 100.00 |
| FEMALES        |        |         |           |      |     |        |     |       |     |        |
| 1              | 01/01- | COUNT   | 21        | 22   | 22  | 5,705  | 43  | 843   | 22  | 6,678  |
|                | 12/31  | PERCENT | .32       | .32  | .32 | 85.44  | .65 | 12.62 | .32 | 100.00 |
| SEXES COMBINED |        |         |           |      |     |        |     |       |     |        |
| 1              | 01/01- | COUNT   | 64        | 130  | 22  | 10,374 | 43  | 1,837 | 44  | 12,514 |
|                | 12/31  | PERCENT | .51       | 1.04 | .18 | 82.90  | .34 | 14.68 | .35 | 100.00 |

TABLE 38 IGUSHIK RIVER DAILY SOCKEYE SALMON  
ESCAPEMENT COUNTS, 1973

| DATE    | DAILY<br>COUNT | ACCUMULATIVE<br>COUNT | DAILY PERCENT<br>OF TOTAL | ACCUMULATIVE<br>PERCENT |
|---------|----------------|-----------------------|---------------------------|-------------------------|
| JUNE 26 | 18             | 18                    | .03                       | .03                     |
| 27      | 0              | 18                    | 0.00                      | .03                     |
| 28      | 0              | 18                    | 0.00                      | .03                     |
| 29      | 0              | 18                    | 0.00                      | .03                     |
| 30      | 0              | 18                    | 0.00                      | .03                     |
| JULY 1  | 0              | 18                    | 0.00                      | .03                     |
| 2       | 10,572         | 10,590                | 17.77                     | 17.80                   |
| 3       | 5,256          | 15,846                | 8.83                      | 26.63                   |
| 4       | 5,058          | 20,904                | 8.50                      | 35.13                   |
| 5       | 4,926          | 25,830                | 8.28                      | 43.41                   |
| 6       | 4,158          | 29,988                | 6.99                      | 50.40                   |
| 7       | 2,928          | 32,916                | 4.92                      | 55.32                   |
| 8       | 996            | 33,912                | 1.67                      | 56.99                   |
| 9       | 1,056          | 34,968                | 1.77                      | 58.76                   |
| 10      | 1,212          | 36,180                | 2.04                      | 60.80                   |
| 11      | 4,224          | 40,404                | 7.10                      | 67.90                   |
| 12      | 6,192          | 46,596                | 10.40                     | 78.30                   |
| 13      | 4,890          | 51,486                | 8.22                      | 86.52                   |
| 14      | 2,076          | 53,562                | 3.49                      | 90.01                   |
| 15      | 2,454          | 56,016                | 4.12                      | 94.13                   |
| 16      | 1,230          | 57,246                | 2.07                      | 96.20                   |
| 17      | 1,044          | 58,290                | 1.75                      | 97.95                   |
| 18      | 450            | 58,740                | .76                       | 98.71                   |
| 19      | 102            | 58,842                | .17                       | 98.88                   |
| 20      | 492            | 59,334                | .83                       | 99.71                   |
| 21      | 156            | 59,490                | .26                       | 99.97                   |
| 22      | 18             | 59,508                | .03                       | 100.00                  |

TABLE 39 IGUSHIK RIVER ESCAPEMENT OF SOCKEYE SALMON, SEX COMPOSITION BY SAMPLE PERIOD, 1973

| PERIOD<br>NUMBER | DATE        | NO. OF FISH<br>SAMPLED | COUNT |         | PERCENT |         | ESCAPEMENT | NUMBER IN ESCAPEMENT |         |
|------------------|-------------|------------------------|-------|---------|---------|---------|------------|----------------------|---------|
|                  |             |                        | MALES | FEMALES | MALES   | FEMALES |            | MALES                | FEMALES |
| 1                | 06/26-07/22 | 585                    | 260   | 325     | 44.44   | 55.56   | 59,508     | 26,448               | 33,060  |

- 51 -

TABLE 40 WOOD RIVER DAILY SOCKEYE SALMON  
ESCAPEMENT COUNTS, 1973

| DATE    | DAILY<br>COUNT | ACCUMULATIVE<br>COUNT | DAILY PERCENT<br>OF TOTAL | ACCUMULATIVE<br>PERCENT |
|---------|----------------|-----------------------|---------------------------|-------------------------|
| JUNE 20 | 36             | 36                    | .01                       | .01                     |
| 21      | 594            | 630                   | .13                       | .19                     |
| 22      | 480            | 1,110                 | .14                       | .33                     |
| 23      | 66             | 1,176                 | .02                       | .35                     |
| 24      | 42             | 1,218                 | .01                       | .36                     |
| 25      | 30             | 1,248                 | .01                       | .37                     |
| 26      | 78             | 1,326                 | .02                       | .39                     |
| 27      | 510            | 1,836                 | .15                       | .54                     |
| 28      | 3,468          | 5,304                 | 1.05                      | 1.59                    |
| 29      | 3,312          | 8,316                 | .91                       | 2.50                    |
| 30      | 8,862          | 17,178                | 2.68                      | 5.18                    |
| JULY 1  | 32,442         | 49,620                | 9.82                      | 15.00                   |
| 2       | 8,046          | 57,666                | 2.43                      | 17.43                   |
| 3       | 8,514          | 66,180                | 2.58                      | 20.01                   |
| 4       | 6,210          | 72,390                | 1.88                      | 21.89                   |
| 5       | 2,970          | 75,360                | .90                       | 22.79                   |
| 6       | 7,080          | 82,440                | 2.14                      | 24.93                   |
| 7       | 5,034          | 87,474                | 1.52                      | 26.45                   |
| 8       | 35,586         | 123,060               | 10.77                     | 37.22                   |
| 9       | 86,208         | 209,268               | 26.09                     | 63.31                   |
| 10      | 47,844         | 257,112               | 14.48                     | 77.79                   |
| 11      | 34,158         | 291,270               | 10.34                     | 88.13                   |
| 12      | 15,954         | 307,224               | 4.83                      | 92.96                   |
| 13      | 9,876          | 317,100               | 2.99                      | 95.95                   |
| 14      | 4,680          | 321,780               | 1.42                      | 97.37                   |
| 15      | 2,370          | 324,150               | .72                       | 98.09                   |
| 16      | 1,908          | 326,058               | .58                       | 98.67                   |
| 17      | 1,884          | 327,942               | .57                       | 99.24                   |
| 18      | 732            | 328,674               | .22                       | 99.46                   |
| 19      | 612            | 329,286               | .18                       | 99.64                   |
| 20      | 498            | 329,784               | .15                       | 99.79                   |
| 21      | 228            | 330,012               | .07                       | 99.86                   |
| 22      | 84             | 330,096               | .03                       | 99.89                   |
| 23      | 246            | 330,342               | .07                       | 99.96                   |
| 24      | 132            | 330,474               | .04                       | 100.00                  |

TABLE 41 WOOD RIVER ESCAPEMENT OF SOCKEYE SALMON, SEX COMPOSITION BY SAMPLE PERIOD, 1973

1  
53  
1

| PERIOD<br>NUMBER | DATE        | NO. OF FISH<br>SAMPLED | COUNT |         | PERCENT |         | ESCAPEMENT | NUMBER IN ESCAPEMENT |         |
|------------------|-------------|------------------------|-------|---------|---------|---------|------------|----------------------|---------|
|                  |             |                        | MALES | FEMALES | MALES   | FEMALES |            | MALES                | FEMALES |
| 1                | 06/20-07/24 | 597                    | 281   | 316     | 47.07   | 52.93   | 330,474    | 155,550              | 174,924 |

TABLE 42 NUYAKUK RIVER DAILY SOCKEYE SALMON  
ESCAPEMENT COUNTS, 1973

| DATE   | DAILY<br>COUNT | ACCUMULATIVE<br>COUNT | DAILY PERCENT<br>OF TOTAL | ACCUMULATIVE<br>PERCENT |
|--------|----------------|-----------------------|---------------------------|-------------------------|
| JULY 7 | 102            | 102                   | .09                       | .09                     |
| 8      | 702            | 804                   | .64                       | .73                     |
| 9      | 1,806          | 2,610                 | 1.64                      | 2.37                    |
| 10     | 930            | 3,540                 | .85                       | 3.22                    |
| 11     | 1,350          | 4,890                 | 1.23                      | 4.45                    |
| 12     | 5,802          | 10,692                | 5.27                      | 9.72                    |
| 13     | 11,292         | 21,984                | 10.26                     | 19.98                   |
| 14     | 17,898         | 39,882                | 16.27                     | 36.25                   |
| 15     | 17,148         | 57,030                | 15.59                     | 51.84                   |
| 16     | 10,170         | 67,200                | 9.24                      | 61.08                   |
| 17     | 8,586          | 75,786                | 7.80                      | 68.88                   |
| 18     | 10,044         | 85,830                | 9.13                      | 78.01                   |
| 19     | 8,820          | 94,650                | 8.02                      | 86.03                   |
| 20     | 6,432          | 101,082               | 5.85                      | 91.88                   |
| 21     | 4,662          | 105,744               | 4.24                      | 96.12                   |
| 22     | 1,824          | 107,568               | 1.66                      | 97.78                   |
| 23     | 546            | 108,114               | .50                       | 98.28                   |
| 24     | 420            | 108,534               | .38                       | 98.66                   |
| 25     | 516            | 109,050               | .47                       | 99.13                   |
| 26     | 288            | 109,338               | .26                       | 99.39                   |
| 27     | 210            | 109,548               | .19                       | 99.58                   |
| 28     | 168            | 109,716               | .15                       | 99.73                   |
| 29     | 192            | 109,908               | .17                       | 99.90                   |
| 30     | 108            | 110,016               | .10                       | 100.00                  |

TABLE 43 NUYAKUK RIVER ESCAPEMENT OF SOCKEYE SALMON, SEX COMPOSITION BY SAMPLE PERIOD, 1973

| PERIOD NUMBER | DATE        | NO. OF FISH SAMPLED | COUNT |         | PERCENT |         | ESCAPEMENT | NUMBER IN ESCAPEMENT |         |
|---------------|-------------|---------------------|-------|---------|---------|---------|------------|----------------------|---------|
|               |             |                     | MALES | FEMALES | MALES   | FEMALES |            | MALES                | FEMALES |
| 1             | 07/07-07/15 | 441                 | 161   | 280     | 36.51   | 63.49   | 57,030     | 20,820               | 36,210  |
| 2             | 07/16-07/30 | 355                 | 147   | 208     | 41.41   | 58.59   | 52,986     | 21,941               | 31,045  |
| TOTAL         |             | 796                 | 308   | 488     | 38.87   | 61.13   | 110,016    | 42,761               | 67,255  |

1  
55  
1

TABLE 44 NOYAKUK RIVER ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SAMPLE PERIOD AND SEX, NUMBER AND PERCENT, 1973

| SAMPLE PERIOD         | DATE   |         | AGE GROUP |       |     |        |     |     | TOTAL |         |
|-----------------------|--------|---------|-----------|-------|-----|--------|-----|-----|-------|---------|
|                       |        |         | 41        | 42    | 51  | 52     | 53  | 62  |       | 63      |
| <b>MALES</b>          |        |         |           |       |     |        |     |     |       |         |
| 1                     | 07/07- | COUNT   | 388       | 776   | 130 | 18,880 | 129 | --  | 517   | 20,820  |
|                       | 07/15  | PERCENT | 1.86      | 3.73  | .62 | 90.68  | .62 | --  | 2.48  | 48.69   |
| 2                     | 07/16- | COUNT   | 3,433     | 597   | --  | 17,016 | 149 | --  | 746   | 21,941  |
|                       | 07/30  | PERCENT | 15.65     | 2.72  | --  | 77.55  | .68 | --  | 3.40  | 51.31   |
| <b>COLUMN TOTALS</b>  |        | COUNT   | 3,821     | 1,373 | 130 | 35,896 | 278 | --  | 1,263 | 42,761  |
|                       |        | PERCENT | 8.94      | 3.21  | .30 | 83.95  | .65 | --  | 2.95  | 100.00  |
| <b>FEMALES</b>        |        |         |           |       |     |        |     |     |       |         |
| 1                     | 07/07- | COUNT   | 1,423     | 776   | --  | 32,977 | --  | 129 | 905   | 36,210  |
|                       | 07/15  | PERCENT | 3.93      | 2.14  | --  | 91.07  | --  | .36 | 2.50  | 53.84   |
| 2                     | 07/16- | COUNT   | 4,328     | 597   | --  | 25,523 | --  | 149 | 448   | 31,045  |
|                       | 07/30  | PERCENT | 13.94     | 1.92  | --  | 82.21  | --  | .48 | 1.44  | 46.16   |
| <b>COLUMN TOTALS</b>  |        | COUNT   | 5,751     | 1,373 | --  | 58,500 | --  | 278 | 1,353 | 67,255  |
|                       |        | PERCENT | 8.55      | 2.04  | --  | 85.98  | --  | .42 | 2.01  | 100.00  |
| <b>SEXES COMBINED</b> |        |         |           |       |     |        |     |     |       |         |
| 1                     | 07/07- | COUNT   | 1,811     | 1,552 | 130 | 51,857 | 129 | 129 | 1,422 | 57,030  |
|                       | 07/15  | PERCENT | 3.17      | 2.72  | .23 | 91.93  | .23 | .23 | 2.49  | 51.84   |
| 2                     | 07/16- | COUNT   | 7,761     | 1,194 | --  | 42,539 | 149 | 149 | 1,194 | 52,986  |
|                       | 07/30  | PERCENT | 14.65     | 2.25  | --  | 80.29  | .28 | .28 | 2.25  | 48.16   |
| <b>COLUMN TOTALS</b>  |        | COUNT   | 9,572     | 2,746 | 130 | 94,396 | 278 | 278 | 2,616 | 110,016 |
|                       |        | PERCENT | 8.70      | 2.50  | .12 | 85.80  | .25 | .25 | 2.38  | 100.00  |

TABLE 45 NUSHAGAK-MULCHATNA TOWER DAILY SOCKEYE SALMON  
ESCAPEMENT COUNTS, 1973

| DATE    | DAILY<br>COUNT | ACCUMULATIVE<br>COUNT | DAILY PERCENT<br>OF TOTAL | ACCUMULATIVE<br>PERCENT |
|---------|----------------|-----------------------|---------------------------|-------------------------|
| JUNE 26 | 6              | 6                     | 0.00                      | 0.00                    |
| 27      | 0              | 6                     | 0.00                      | 0.00                    |
| 28      | 12             | 18                    | .01                       | .01                     |
| 29      | 120            | 138                   | .06                       | .07                     |
| 30      | 168            | 306                   | .09                       | .16                     |
| JULY 1  | 96             | 402                   | .05                       | .21                     |
| 2       | 390            | 792                   | .20                       | .41                     |
| 3       | 2,718          | 3,510                 | 1.43                      | 1.84                    |
| 4       | 7,302          | 10,812                | 3.83                      | 5.67                    |
| 5       | 10,956         | 21,768                | 5.75                      | 11.42                   |
| 6       | 12,744         | 34,512                | 6.69                      | 18.11                   |
| 7       | 7,548          | 42,060                | 3.96                      | 22.07                   |
| 8       | 6,492          | 48,552                | 3.41                      | 25.48                   |
| 9       | 2,724          | 51,276                | 1.43                      | 26.91                   |
| 10      | 7,932          | 59,208                | 4.17                      | 31.08                   |
| 11      | 41,490         | 100,698               | 21.79                     | 52.87                   |
| 12      | 35,016         | 135,714               | 18.39                     | 71.26                   |
| 13      | 21,012         | 156,726               | 11.04                     | 82.30                   |
| 14      | 20,442         | 177,168               | 10.74                     | 93.04                   |
| 15      | 7,944          | 185,112               | 4.17                      | 97.21                   |
| 16      | 2,226          | 187,338               | 1.17                      | 98.38                   |
| 17      | 990            | 188,328               | .52                       | 98.90                   |
| 18      | 630            | 188,958               | .33                       | 99.23                   |
| 19      | 810            | 189,768               | .43                       | 99.66                   |
| 20      | 354            | 190,122               | .19                       | 99.85                   |
| 21      | 228            | 190,350               | .12                       | 99.97                   |
| 22      | 36             | 190,386               | .02                       | 99.99                   |
| 23      | 6              | 190,392               | 0.00                      | 99.99                   |
| 24      | 18             | 190,410               | .01                       | 100.00                  |

FOOTNOTES

1. THESE DAILY COUNTS WERE TAKEN AT THE NUSHAGAK-MULCHATNA TOWER, WHICH WAS LOCATED DOWNSTREAM FROM THE MOUTH OF THE NUYAKUK RIVER. THUS THESE DAILY COUNTS INCLUDE FISH RETURNING TO BOTH THE NUYAKUK AND NUSHAGAK-MULCHATNA RIVER SYSTEMS. REFER TO TABLE A-2 FOR THE ESTIMATED ESCAPEMENT TO THE NUSHAGAK-MULCHATNA RIVER SYSTEM.

TABLE 46 NUSHAGAK-MULCHATNA TOWER ESCAPEMENT OF SOCKEYE SALMON, SEX COMPOSITION BY SAMPLE PERIOD, 1973

| PERIOD<br>NUMBER | DATE        | NO. OF FISH<br>SAMPLED | COUNT |         | PERCENT |         | ESCAPEMENT | NUMBER IN ESCAPEMENT |         |
|------------------|-------------|------------------------|-------|---------|---------|---------|------------|----------------------|---------|
|                  |             |                        | MALES | FEMALES | MALES   | FEMALES |            | MALES                | FEMALES |
| 1                | 06/26-07/24 | 403                    | 149   | 254     | 36.97   | 63.03   | 190,410    | 70,400               | 120,010 |

NOTE: THIS ESCAPEMENT SAMPLING WAS TAKEN AT THE NUSHAGAK-MULCHATNA TOWER, WHICH WAS LOCATED DOWNSTREAM FROM THE MOUTH OF THE NUYAKUK RIVER. THIS SAMPLING INCLUDES FISH RETURNING TO BOTH THE NUYAKUK AND NUSHAGAK-MULCHATNA RIVER SYSTEMS. REFER TO TABLE A-1 FOR THE AGE BY SEX COMPOSITION OF THE FISH SAMPLED AT THE NUSHAGAK-MULCHATNA TOWER. REFER TO TABLE A-2 FOR THE AGE BY SEX COMPOSITION OF THE ESTIMATED ESCAPEMENT TO THE NUSHAGAK-MULCHATNA RIVER SYSTEM.

TABLE 47 SNAKE RIVER ESCAPEMENT OF SOCKEYE SALMON, SEX COMPOSITION BY SAMPLE PERIOD, 1973

| PERIOD<br>NUMBER | DATE        | NO. OF FISH<br>SAMPLED | COUNT |         | PERCENT |         | ESCAPEMENT | NUMBER IN ESCAPEMENT |         |
|------------------|-------------|------------------------|-------|---------|---------|---------|------------|----------------------|---------|
|                  |             |                        | MALES | FEMALES | MALES   | FEMALES |            | MALES                | FEMALES |
| 1                | 07/07-08/02 | 262                    | 151   | 111     | 57.63   | 42.37   | 915        | 527                  | 388     |

## TOGIAC DISTRICT

Although the sockeye salmon return to the district was forecast to be only slightly above escapement requirements, total gear registration was up considerably over levels of the previous year. The 1973 registration included 220 drift units and 11 set units for a total of 231. In compliance with a new regulation each drift fisherman was limited to 25 fathoms of net while each set net fisherman could use only 12.5 fathoms during the emergency order period (June 23 to July 17). Pooling of gear was allowed by licensed gear holders during this period up to a maximum of 150 fathoms of net per vessel or 50 fathoms for a set net.

The Togiak district includes five separate sections (Cape Peirce, Osviak, Matogak, Togiak and Kulukak) and is not managed in the same manner as the other districts in Bristol Bay. Fishing periods are set in advance of the season and are adjusted as required as the salmon season progresses. In 1973 regular 4 days per week fishing was allowed in the Togiak section through June 29. Fishing was cut back by two days in the following week because catches were lagging behind historical levels for that date. A large harvest during this short week coupled with low escapements through July 7 prompted a complete closure for the Togiak section for the following week of July 9-13. Lagging escapements through July 14 required an extension of the closure through July 18. The Togiak River escapement was felt adequate by July 17 (48,000) and so fishing was resumed on July 18 and subsequently extended through July 21. The cumulative sockeye catch for the district was 96,000 by the end of the season. The age composition of the catch included 10% 4-year fish, about 73% 5-year fish, and 17% 6-year fish.

As a result of the extended closures in the main Togiak section the fleet dispersed to the Osviak, Matogak, Kulukak and Cape Peirce sections, where good chum runs were encountered.

The total escapement of 96,000 sockeye salmon was only 20% over the goal of 80,000 and within the management range of 60-100,000.

The king salmon harvest of 11,000 was slightly above the long term historical level for this district but down somewhat from the previous four years. The chum salmon harvest of 195,000 was over 200% of the 19-year historic average and was the second largest district catch ever for this species. The coho salmon catch of 23,000 was almost 400% above the district's 19-year average for this species. No significant numbers of pink salmon are caught during odd-numbered years in any of Bristol Bay's districts.

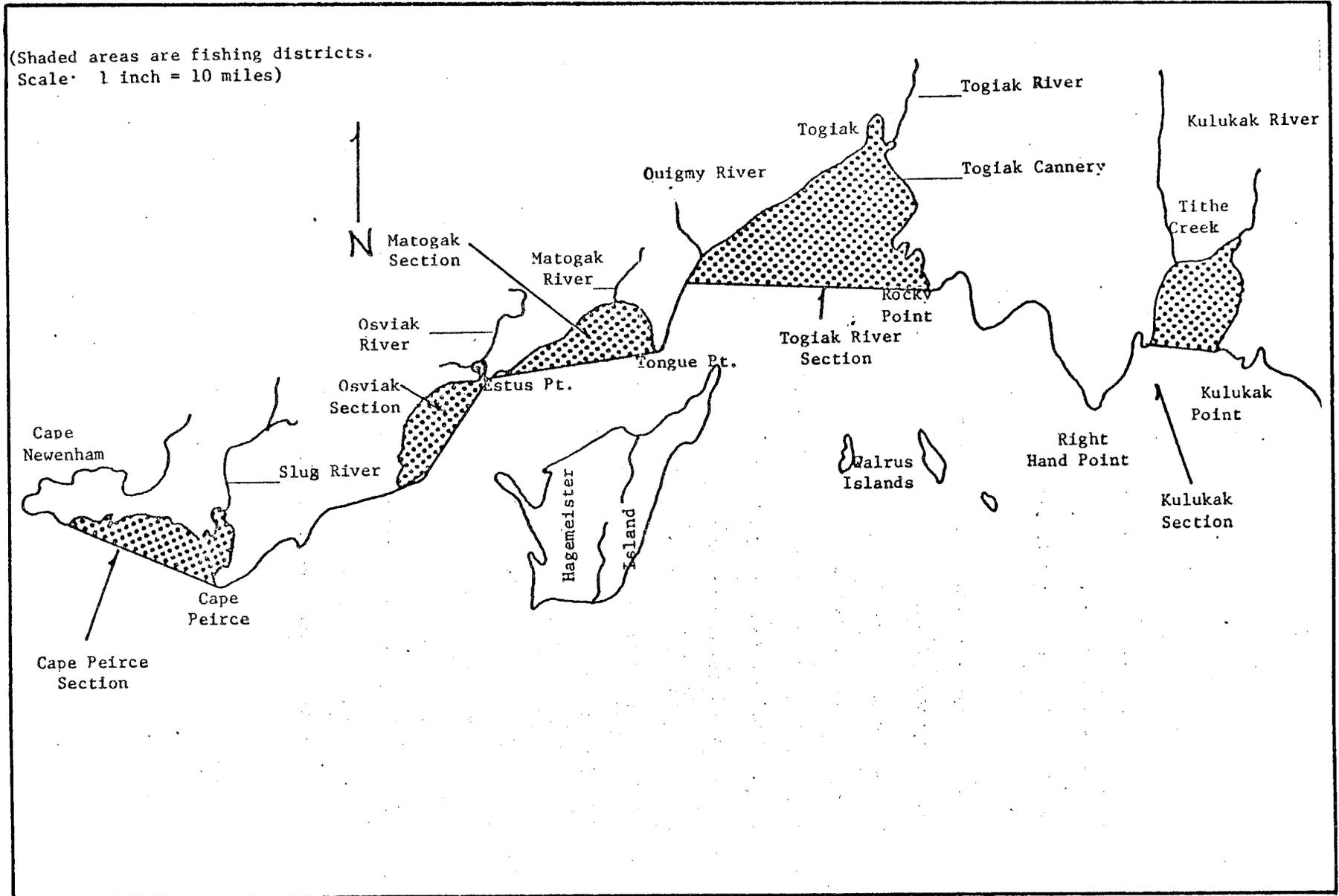


Figure 6. Togiak District commercial fishing boundaries, 1973.

TABLE 48 TOGIAK RIVER CATCH AND ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SEX, NUMBER AND PERCENT, 1973

|                             | AGE GROUP |       |        |     |         |       |     |        |     |     | TOTAL   |
|-----------------------------|-----------|-------|--------|-----|---------|-------|-----|--------|-----|-----|---------|
|                             | 31        | 41    | 42     | 51  | 52      | 53    | 62  | 63     | 73  | 74  |         |
| <b>CATCH</b>                |           |       |        |     |         |       |     |        |     |     |         |
| <b>MALES</b>                |           |       |        |     |         |       |     |        |     |     |         |
| NUMBER                      | --        | 1,477 | 3,571  | 46  | 28,696  | 1,877 | 398 | 7,555  | 131 | 191 | 43,942  |
| PERCENT                     | --        | 3.36  | 8.13   | .11 | 65.30   | 4.27  | .91 | 17.19  | .30 | .43 | 45.91   |
| <b>FEMALES</b>              |           |       |        |     |         |       |     |        |     |     |         |
| NUMBER                      | 53        | 1,665 | 3,125  | 78  | 36,943  | 1,454 | 256 | 8,041  | 76  | 90  | 51,781  |
| PERCENT                     | .16       | 3.22  | 6.04   | .15 | 71.34   | 2.81  | .49 | 15.53  | .15 | .17 | 54.09   |
| <b>SEXES COMBINED</b>       |           |       |        |     |         |       |     |        |     |     |         |
| NUMBER                      | 53        | 3,142 | 6,696  | 124 | 65,639  | 3,331 | 654 | 15,596 | 207 | 281 | 95,723  |
| PERCENT                     | .06       | 3.28  | 7.00   | .13 | 68.57   | 3.48  | .68 | 16.29  | .22 | .29 | 100.00  |
| <b>ESCAPEMENT</b>           |           |       |        |     |         |       |     |        |     |     |         |
| <b>MALES</b>                |           |       |        |     |         |       |     |        |     |     |         |
| NUMBER                      | --        | 279   | 6,173  | --  | 33,638  | 565   | 135 | 8,045  | --  | --  | 48,835  |
| PERCENT                     | --        | .57   | 12.64  | --  | 58.88   | 1.16  | .28 | 16.47  | --  | --  | 51.01   |
| <b>FEMALES</b>              |           |       |        |     |         |       |     |        |     |     |         |
| NUMBER                      | --        | 859   | 8,084  | --  | 30,975  | 1,257 | --  | 5,720  | --  | --  | 46,895  |
| PERCENT                     | --        | 1.83  | 17.24  | --  | 66.05   | 2.68  | --  | 12.20  | --  | --  | 48.99   |
| <b>SEXES COMBINED</b>       |           |       |        |     |         |       |     |        |     |     |         |
| NUMBER                      | --        | 1,138 | 14,257 | --  | 64,613  | 1,822 | 135 | 13,765 | --  | --  | 95,730  |
| PERCENT                     | --        | 1.19  | 14.89  | --  | 67.50   | 1.90  | .14 | 14.38  | --  | --  | 100.00  |
| <b>CATCH AND ESCAPEMENT</b> |           |       |        |     |         |       |     |        |     |     |         |
| <b>MALES</b>                |           |       |        |     |         |       |     |        |     |     |         |
| NUMBER                      | --        | 1,756 | 9,744  | 46  | 62,334  | 2,442 | 533 | 15,600 | 131 | 191 | 92,777  |
| PERCENT                     | --        | 1.89  | 10.50  | .05 | 67.19   | 2.63  | .57 | 16.82  | .14 | .21 | 48.46   |
| <b>FEMALES</b>              |           |       |        |     |         |       |     |        |     |     |         |
| NUMBER                      | 53        | 2,524 | 11,209 | 78  | 67,918  | 2,711 | 256 | 13,761 | 76  | 90  | 98,676  |
| PERCENT                     | .05       | 2.56  | 11.36  | .08 | 68.83   | 2.75  | .26 | 13.94  | .08 | .09 | 51.54   |
| <b>SEXES COMBINED</b>       |           |       |        |     |         |       |     |        |     |     |         |
| NUMBER                      | 53        | 4,280 | 20,953 | 124 | 130,252 | 5,153 | 789 | 29,361 | 207 | 281 | 191,453 |
| PERCENT                     | .03       | 2.24  | 10.94  | .06 | 68.03   | 2.69  | .41 | 15.34  | .11 | .15 | 100.00  |

TABLE 49 TOGIAK DISTRICT COMMERCIAL CATCH OF SOCKEYE SALMON, SEX COMPOSITION BY SAMPLE PERIOD, 1973

| PERIOD<br>NUMBER | DATE        | NO. OF FISH<br>SAMPLED | COUNT |         | PERCENT |         | CATCH  | NUMBER IN CATCH |         |
|------------------|-------------|------------------------|-------|---------|---------|---------|--------|-----------------|---------|
|                  |             |                        | MALES | FEMALES | MALES   | FEMALES |        | MALES           | FEMALES |
| 1                | 01/01-07/01 | 609                    | 282   | 327     | 46.31   | 53.69   | 19,575 | 9,064           | 10,511  |
| 2                | 07/02-07/08 | 556                    | 230   | 326     | 41.37   | 58.63   | 25,491 | 10,545          | 14,946  |
| 3                | 07/09-07/22 | 554                    | 264   | 290     | 47.65   | 52.35   | 24,316 | 11,587          | 12,729  |
| 4                | 07/23-12/31 | 496                    | 240   | 256     | 48.39   | 51.61   | 26,341 | 12,746          | 13,595  |
| TOTAL            |             | 2,215                  | 1,016 | 1,199   | 45.91   | 54.09   | 95,723 | 43,942          | 51,781  |

TABLE 50 TOGIAK DISTRICT COMMERCIAL CATCH OF SOCKEYE SALMON, AGE GROUP BY SAMPLE PERIOD AND SEX,  
NUMBER AND PERCENT, 1973

| SAMPLE PERIOD  | DATE   |         | AGE GROUP |       |       |     |        |       |      |        |     |      | TOTAL  |
|----------------|--------|---------|-----------|-------|-------|-----|--------|-------|------|--------|-----|------|--------|
|                |        |         | 31        | 41    | 42    | 51  | 52     | 53    | 62   | 63     | 73  | 74   |        |
| MALES          |        |         |           |       |       |     |        |       |      |        |     |      |        |
| 1              | 01/01- | COUNT   | --        | 643   | 450   | --  | 6,750  | 32    | 32   | 1,093  | 32  | 32   | 9,064  |
|                | 07/01  | PERCENT | --        | 7.09  | 4.96  | --  | 74.47  | .35   | .35  | 12.06  | .35 | .35  |        |
| 2              | 07/02- | COUNT   | --        | 596   | 1,100 | 46  | 6,740  | 275   | 137  | 1,605  | 46  | --   | 10,545 |
|                | 07/08  | PERCENT | --        | 5.65  | 10.43 | .43 | 63.91  | 2.61  | 1.30 | 15.22  | .43 | --   |        |
| 3              | 07/09- | COUNT   | --        | 132   | 746   | --  | 7,505  | 614   | 176  | 2,414  | --  | --   | 11,587 |
|                | 07/22  | PERCENT | --        | 1.14  | 6.44  | --  | 64.77  | 5.30  | 1.52 | 20.83  | --  | --   |        |
| 4              | 07/23- | COUNT   | --        | 106   | 1,275 | --  | 7,701  | 956   | 53   | 2,443  | 53  | 159  | 12,746 |
|                | 12/31  | PERCENT | --        | .83   | 10.00 | --  | 60.42  | 7.50  | .42  | 19.17  | .42 | 1.25 |        |
| COLUMN TOTALS  |        | COUNT   | --        | 1,477 | 3,571 | 46  | 28,696 | 1,877 | 398  | 7,555  | 131 | 191  | 43,942 |
|                |        | PERCENT | --        | 3.36  | 8.13  | .11 | 65.30  | 4.27  | .91  | 17.19  | .30 | .43  |        |
| FEMALES        |        |         |           |       |       |     |        |       |      |        |     |      |        |
| 1              | 01/01- | COUNT   | --        | 836   | 289   | 32  | 8,004  | 64    | 32   | 1,222  | 32  | --   | 10,511 |
|                | 07/01  | PERCENT | --        | 7.95  | 2.75  | .31 | 76.15  | .61   | .31  | 11.62  | .31 | --   |        |
| 2              | 07/02- | COUNT   | --        | 688   | 321   | 46  | 11,461 | 92    | 92   | 2,200  | --  | 46   | 14,946 |
|                | 07/08  | PERCENT | --        | 4.60  | 2.15  | .31 | 76.69  | .61   | .61  | 14.72  | --  | .31  |        |
| 3              | 07/09- | COUNT   | --        | 88    | 922   | --  | 8,822  | 395   | 132  | 2,282  | 44  | 44   | 12,729 |
|                | 07/22  | PERCENT | --        | .69   | 7.24  | --  | 69.31  | 3.10  | 1.03 | 17.93  | .34 | .34  |        |
| 4              | 07/23- | COUNT   | 53        | 53    | 1,593 | --  | 8,656  | 903   | --   | 2,337  | --  | --   | 13,595 |
|                | 12/31  | PERCENT | .39       | .39   | 11.72 | --  | 63.67  | 6.64  | --   | 17.19  | --  | --   |        |
| COLUMN TOTALS  |        | COUNT   | 53        | 1,665 | 3,125 | 78  | 36,943 | 1,454 | 256  | 8,041  | 76  | 90   | 51,781 |
|                |        | PERCENT | .10       | 3.22  | 6.04  | .15 | 71.34  | 2.81  | .49  | 15.53  | .15 | .17  |        |
| SEXES COMBINED |        |         |           |       |       |     |        |       |      |        |     |      |        |
| 1              | 01/01- | COUNT   | --        | 1,479 | 739   | 32  | 14,754 | 96    | 64   | 2,315  | 64  | 32   | 19,575 |
|                | 07/01  | PERCENT | --        | 7.56  | 3.77  | .16 | 75.37  | .49   | .33  | 11.83  | .33 | .16  |        |
| 2              | 07/02- | COUNT   | --        | 1,284 | 1,421 | 92  | 18,201 | 367   | 229  | 3,805  | 46  | 46   | 25,491 |
|                | 07/08  | PERCENT | --        | 5.04  | 5.57  | .36 | 71.40  | 1.44  | .90  | 14.93  | .18 | .18  |        |
| 3              | 07/09- | COUNT   | --        | 220   | 1,668 | --  | 16,327 | 1,009 | 308  | 4,696  | 44  | 44   | 24,316 |
|                | 07/22  | PERCENT | --        | .90   | 6.86  | --  | 67.15  | 4.15  | 1.27 | 19.31  | .18 | .18  |        |
| 4              | 07/23- | COUNT   | 53        | 159   | 2,868 | --  | 16,357 | 1,859 | 53   | 4,780  | 53  | 159  | 26,341 |
|                | 12/31  | PERCENT | .20       | .60   | 10.89 | --  | 62.10  | 7.06  | .20  | 18.15  | .20 | .60  |        |
| COLUMN TOTALS  |        | COUNT   | 53        | 3,142 | 6,696 | 124 | 65,639 | 3,331 | 654  | 15,596 | 207 | 281  | 95,723 |
|                |        | PERCENT | .06       | 3.28  | 7.00  | .13 | 68.57  | 3.48  | .68  | 16.29  | .22 | .29  |        |

TABLE 51 TOGIK RIVER DAILY SOCKEYE SALMON  
ESCAPEMENT COUNTS, 1973

| DATE   | DAILY<br>COUNT | ACCUMULATIVE<br>COUNT | DAILY PERCENT<br>OF TOTAL | ACCUMULATIVE<br>PERCENT |
|--------|----------------|-----------------------|---------------------------|-------------------------|
| JULY 1 | 6              | 6                     | .01                       | .01                     |
| 2      | 0              | 6                     | 0.00                      | .01                     |
| 3      | 0              | 6                     | 0.00                      | .01                     |
| 4      | 24             | 30                    | .02                       | .03                     |
| 5      | 60             | 90                    | .06                       | .09                     |
| 6      | 54             | 144                   | .06                       | .15                     |
| 7      | 60             | 204                   | .06                       | .21                     |
| 8      | 2,952          | 3,156                 | 3.08                      | 3.29                    |
| 9      | 4,500          | 7,656                 | 4.70                      | 7.99                    |
| 10     | 3,600          | 11,256                | 3.76                      | 11.75                   |
| 11     | 4,968          | 16,224                | 5.19                      | 16.94                   |
| 12     | 5,100          | 21,324                | 5.33                      | 22.27                   |
| 13     | 5,340          | 26,664                | 5.58                      | 27.85                   |
| 14     | 6,588          | 33,252                | 6.88                      | 34.73                   |
| 15     | 4,176          | 37,428                | 4.36                      | 39.09                   |
| 16     | 5,334          | 42,762                | 5.57                      | 44.66                   |
| 17     | 5,256          | 48,018                | 5.49                      | 50.15                   |
| 18     | 5,898          | 53,916                | 6.16                      | 56.31                   |
| 19     | 7,530          | 61,446                | 7.87                      | 64.18                   |
| 20     | 5,700          | 67,146                | 5.95                      | 70.13                   |
| 21     | 5,388          | 72,534                | 5.63                      | 75.76                   |
| 22     | 3,864          | 76,398                | 4.04                      | 79.80                   |
| 23     | 2,976          | 79,374                | 3.11                      | 82.91                   |
| 24     | 1,938          | 81,312                | 2.02                      | 84.93                   |
| 25     | 1,326          | 82,638                | 1.39                      | 86.32                   |
| 26     | 2,508          | 85,146                | 2.62                      | 88.94                   |
| 27     | 2,316          | 87,462                | 2.42                      | 91.36                   |
| 28     | 1,560          | 89,022                | 1.63                      | 92.99                   |
| 29     | 1,062          | 90,084                | 1.11                      | 94.10                   |
| 30     | 1,752          | 91,836                | 1.83                      | 95.93                   |
| 31     | 1,464          | 93,300                | 1.53                      | 97.46                   |
| AUG. 1 | 708            | 94,008                | .74                       | 98.20                   |
| 2      | 642            | 94,650                | .67                       | 98.87                   |
| 3      | 1,050          | 95,700                | 1.10                      | 99.97                   |
| 4      | -6             | 95,694                | -.01                      | 99.96                   |
| 5      | 36             | 95,730                | .04                       | 100.00                  |

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TABLE 52 TOGIAC RIVER ESCAPEMENT OF SOCKEYE SALMON, SEX COMPOSITION BY SAMPLE PERIOD, 1973

| PERIOD<br>NUMBER | DATE        | NO. OF FISH<br>SAMPLED | COUNT |         | PERCENT |         | ESCAPEMENT | NUMBER IN ESCAPEMENT |         |
|------------------|-------------|------------------------|-------|---------|---------|---------|------------|----------------------|---------|
|                  |             |                        | MALES | FEMALES | MALES   | FEMALES |            | MALES                | FEMALES |
| 1                | 07/01-07/16 | 316                    | 162   | 154     | 51.27   | 48.73   | 42,762     | 21,922               | 20,840  |
| 2                | 07/17-08/05 | 370                    | 188   | 182     | 50.81   | 49.19   | 52,968     | 26,913               | 26,055  |
| TOTAL            |             | 686                    | 350   | 336     | 51.01   | 48.99   | 95,730     | 48,835               | 46,895  |

TABLE 53 TOGIAC RIVER ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SAMPLE PERIOD AND SEX, NUMBER AND PERCENT, 1973

| SAMPLE PERIOD         | DATE            |         | AGE GROUP |        |        |       |     | TOTAL  |        |
|-----------------------|-----------------|---------|-----------|--------|--------|-------|-----|--------|--------|
|                       |                 |         | 41        | 42     | 52     | 53    | 62  |        | 63     |
| <b>MALES</b>          |                 |         |           |        |        |       |     |        |        |
| 1                     | 07/01-<br>07/16 | COUNT   | 136       | 2,165  | 14,885 | 135   | 135 | 4,466  | 21,922 |
|                       |                 | PERCENT | .62       | 9.88   | 67.90  | .62   | .62 | 20.37  | 44.89  |
| 2                     | 07/17-<br>08/35 | COUNT   | 143       | 4,008  | 18,753 | 430   | --  | 3,579  | 26,913 |
|                       |                 | PERCENT | .53       | 14.89  | 69.68  | 1.60  | --  | 13.30  | 55.11  |
| COLUMN TOTALS         |                 | COUNT   | 279       | 6,173  | 33,638 | 565   | 135 | 8,045  | 48,835 |
|                       |                 | PERCENT | .57       | 12.64  | 68.88  | 1.16  | .28 | 16.47  | 100.00 |
| <b>FEMALES</b>        |                 |         |           |        |        |       |     |        |        |
| 1                     | 07/01-<br>07/16 | COUNT   | --        | 3,789  | 13,939 | 541   | --  | 2,571  | 20,840 |
|                       |                 | PERCENT | --        | 18.18  | 66.88  | 2.60  | --  | 12.34  | 44.44  |
| 2                     | 07/17-<br>08/35 | COUNT   | 859       | 4,295  | 17,036 | 716   | --  | 3,149  | 26,055 |
|                       |                 | PERCENT | 3.30      | 16.48  | 65.38  | 2.75  | --  | 12.09  | 55.56  |
| COLUMN TOTALS         |                 | COUNT   | 859       | 8,084  | 30,975 | 1,257 | --  | 5,720  | 46,895 |
|                       |                 | PERCENT | 1.83      | 17.24  | 66.05  | 2.68  | --  | 12.20  | 100.00 |
| <b>SEXES COMBINED</b> |                 |         |           |        |        |       |     |        |        |
| 1                     | 07/01-<br>07/16 | COUNT   | 136       | 5,954  | 28,824 | 676   | 135 | 7,037  | 42,762 |
|                       |                 | PERCENT | .32       | 13.92  | 67.40  | 1.58  | .32 | 16.46  | 44.67  |
| 2                     | 07/17-<br>08/35 | COUNT   | 1,002     | 8,303  | 35,789 | 1,146 | --  | 6,728  | 52,968 |
|                       |                 | PERCENT | 1.89      | 15.68  | 67.57  | 2.16  | --  | 12.70  | 55.33  |
| COLUMN TOTALS         |                 | COUNT   | 1,138     | 14,257 | 64,613 | 1,822 | 135 | 13,765 | 95,730 |
|                       |                 | PERCENT | 1.19      | 14.89  | 67.50  | 1.90  | .14 | 14.38  | 100.00 |

Table 54. Mean weights by age class for sockeye salmon in the catch samples, Bristol Bay, 1973.

Naknek-Kvichak District

| 1-Ocean   |     |   | 2-Ocean        |     |    | 3-Ocean        |     |     | 4-Ocean   |     |   |
|-----------|-----|---|----------------|-----|----|----------------|-----|-----|-----------|-----|---|
| Age       | Wt. | N | Age            | Wt. | N  | Age            | Wt. | N   | Age       | Wt. | N |
| -         | -   | - | 4 <sub>2</sub> | 6.7 | 19 | 5 <sub>2</sub> | 7.3 | 43  | -         | -   | - |
| -         | -   | - | 5 <sub>3</sub> | 6.7 | 33 | 6 <sub>3</sub> | 7.6 | 63  | -         | -   | - |
| $\bar{X}$ |     |   | $\bar{X}$      | 6.7 | 52 | $\bar{X}$      | 7.5 | 106 | $\bar{X}$ |     |   |

Egegik District

| 1-Ocean   |     |   | 2-Ocean        |     |    | 3-Ocean        |     |     | 4-Ocean   |     |   |
|-----------|-----|---|----------------|-----|----|----------------|-----|-----|-----------|-----|---|
| Age       | Wt. | N | Age            | Wt. | N  | Age            | Wt. | N   | Age       | Wt. | N |
| -         | -   | - | 4 <sub>2</sub> | 4.9 | 3  | 5 <sub>2</sub> | 7.3 | 22  | -         | -   | - |
| -         | -   | - | 5 <sub>3</sub> | 5.1 | 32 | 6 <sub>3</sub> | 7.5 | 231 | -         | -   | - |
| $\bar{X}$ |     |   | $\bar{X}$      | 5.1 | 35 | $\bar{X}$      | 7.5 | 253 | $\bar{X}$ |     |   |

Table 54. Mean weights by age class for sockeye salmon in the catch samples, Bristol Bay, 1973, continued.

Nushagak-Igushik District

| 1-Ocean   |     |   | 2-Ocean        |     |   | 3-Ocean        |     |     | 4-Ocean        |     |   |
|-----------|-----|---|----------------|-----|---|----------------|-----|-----|----------------|-----|---|
| Age       | Wt. | N | Age            | Wt. | N | Age            | Wt. | N   | Age            | Wt. | N |
| -         | -   | - | 4 <sub>2</sub> | 6.2 | 6 | 4 <sub>1</sub> | 7.9 | 22  | 7 <sub>3</sub> | 7.2 | 1 |
|           |     |   | 5 <sub>3</sub> | 4.3 | 1 | 5 <sub>2</sub> | 7.6 | 160 |                |     |   |
|           |     |   |                |     |   | 6 <sub>3</sub> | 7.8 | 15  |                |     |   |
|           |     |   |                |     |   | 7 <sub>4</sub> | 5.7 | 1   |                |     |   |
| $\bar{X}$ |     |   | $\bar{X}$      | 5.9 | 7 | $\bar{X}$      | 7.6 | 198 | $\bar{X}$      | 7.2 | 1 |

Togiak District

| 1-Ocean   |     |   | 2-Ocean        |     |    | 3-Ocean        |      |     | 4-Ocean        |     |   |
|-----------|-----|---|----------------|-----|----|----------------|------|-----|----------------|-----|---|
| Age       | Wt. | N | Age            | Wt. | N  | Age            | Wt.  | N   | Age            | Wt. | N |
| -         | -   | - |                |     |    | 4 <sub>1</sub> | 7.2  | 19  | 6 <sub>2</sub> | 9.7 | 6 |
|           |     |   | 4 <sub>2</sub> | 5.9 | 24 | 5 <sub>2</sub> | 8.6  | 385 | 7 <sub>3</sub> | 9.1 | 3 |
|           |     |   | 5 <sub>3</sub> | 6.4 | 11 | 6 <sub>3</sub> | 8.3  | 89  |                |     |   |
|           |     |   |                |     |    | 7 <sub>4</sub> | 11.5 | 1   |                |     |   |
| $\bar{X}$ |     |   | $\bar{X}$      | 6.1 | 35 | $\bar{X}$      | 8.5  | 494 | $\bar{X}$      | 9.5 | 9 |

## LITERATURE CITED

McCurdy, M. L. and T. R. Schroeder. 1972. Bristol Bay Sockeye Salmon (Onchorhynchus nerka) 1971. A compilation of catch and escapement data. Alaska Department of Fish and Game Technical Data Report No. 7, p. 102.

APPENDIX

## APPENDIX

TABLE A-1. NUSHAGAK-MULCHATNA TOWER ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SAMPLE PERIOD AND SEX, NUMBER AND PERCENT, 1973

| SAMPLE PERIOD  | DATE   |         | AGE GROUP |        |       |       |         |       | TOTAL |         |
|----------------|--------|---------|-----------|--------|-------|-------|---------|-------|-------|---------|
|                |        |         | 31        | 41     | 42    | 51    | 52      | 62    |       | 63      |
| MALES          |        |         |           |        |       |       |         |       |       |         |
| 1              | 06/26- | COUNT   | --        | 13,230 | 945   | 945   | 51,973  | 945   | 2,362 | 70,400  |
|                | 07/24  | PERCENT | --        | 18.79  | 1.34  | 1.34  | 73.83   | 1.34  | 3.36  | 100.00  |
| FEMALES        |        |         |           |        |       |       |         |       |       |         |
| 1              | 06/26- | COUNT   | 473       | 35,436 | 473   | 2,362 | 78,994  | 1,890 | 472   | 120,010 |
|                | 07/24  | PERCENT | .39       | 29.53  | .39   | 1.97  | 65.75   | 1.57  | .39   | 100.00  |
| SEXES COMBINED |        |         |           |        |       |       |         |       |       |         |
| 1              | 06/26- | COUNT   | 473       | 48,666 | 1,418 | 3,307 | 130,877 | 2,835 | 2,834 | 190,410 |
|                | 07/24  | PERCENT | .25       | 25.56  | .74   | 1.74  | 68.73   | 1.49  | 1.49  | 100.00  |

NOTE: THIS TABULATION IS FOR THE NUSHAGAK-MULCHATNA TOWER, NOT FOR THE NUSHAGAK-MULCHATNA RIVER SYSTEM. REFER TO TABLE A-2 FOR THE ESTIMATED AGE BY SEX COMPOSITION OF THE ESCAPEMENT TO THE RIVER SYSTEM.

## APPENDIX

TABLE A-2. NUSHAGAK-MULCHATNA RIVER SYSTEM ESTIMATED ESCAPEMENT OF SOCKEYE SALMON, AGE GROUP BY SEX, NUMBER AND PERCENT, 1973

|                | AGE GROUP |        |    |       |        |       |       | TOTAL  |
|----------------|-----------|--------|----|-------|--------|-------|-------|--------|
|                | 31        | 41     | 42 | 51    | 52     | 62    | 63    |        |
| MALES          |           |        |    |       |        |       |       |        |
| COUNT          | --        | 9,175  | -- | 795   | 15,676 | 921   | 1,072 | 27,639 |
| PERCENT        | --        | 33.19  | -- | 2.88  | 56.72  | 3.33  | 3.88  | 100.00 |
| FEMALES        |           |        |    |       |        |       |       |        |
| COUNT          | 457       | 28,716 | -- | 2,285 | 19,738 | 1,559 | --    | 52,755 |
| PERCENT        | .87       | 54.43  | -- | 4.33  | 37.41  | 2.96  | --    | 100.00 |
| SEXES COMBINED |           |        |    |       |        |       |       |        |
| COUNT          | 457       | 37,891 | -- | 3,080 | 35,414 | 2,480 | 1,072 | 80,394 |
| PERCENT        | .57       | 47.13  | -- | 3.83  | 44.05  | 3.09  | 1.33  | 100.00 |

NOTE: THIS AGE BY SEX TABULATION IS AN ESTIMATE BASED UPON THE NUSHAGAK-MULCHATNA TOWER TABULATION SHOWN IN TABLE A-1, AND THE NOYAKUK RIVER TABULATION SHOWN IN TABLE 44.

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